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VOLUME VII JULY, 1923 No. 7

Official Organ of the New Mexico Medical Society, Arizona State Medical Association, El Paso County (Texas) Medical Society and the Medical and Surgical Association of the Southwest

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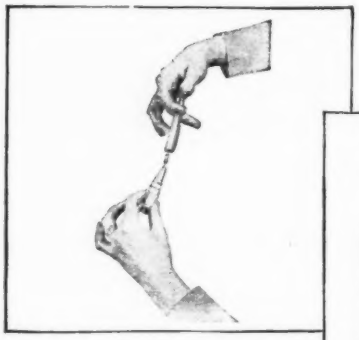

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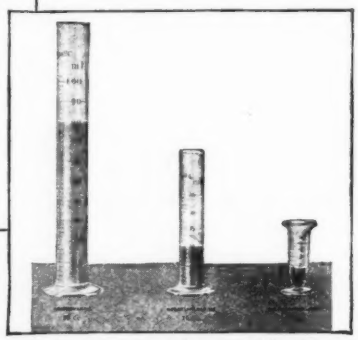

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Werley, G.—401-2 Roberts-Banner Building. Diseases of the Heart.

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Von Almen, S. G.—218 Mills Building. Practice limited to Diseases of the Eye, Ear, Nose and Throat.

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DISEASES OF CHILDREN

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Witherspoon, Louis G.—314 Roberts-Banner Building. Plastic Surgery.

Vance, James—313-4 Mills Building. Practice limited to Surgery.

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Lynch, K. D.—414 Mills Building. Genito-Urinary Surgery. Hours, 11 to 12:30. Phones Main 995 and Main 6501.

Wright, Burnett W.—921 First National Bank Building. Urology and Dermatology.

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Wallace, Alexander—Suite 502, Junior Orpheum Building, 815 So. Hill Street. General Surgery.

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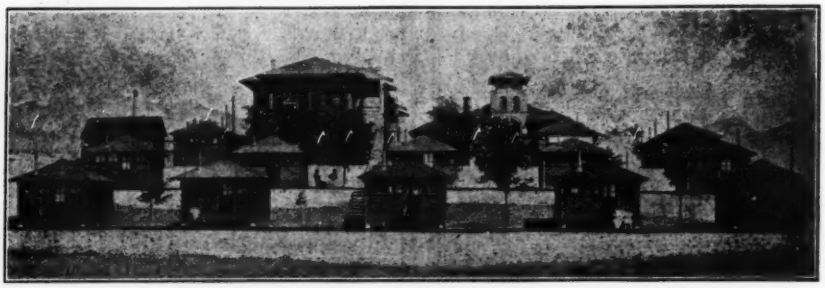

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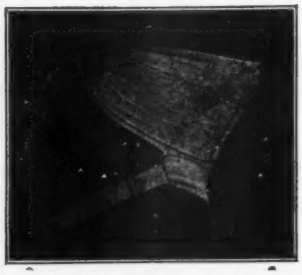

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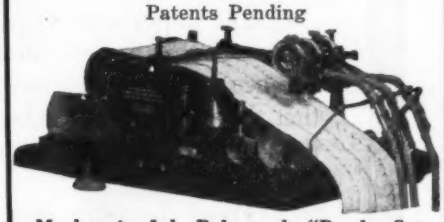

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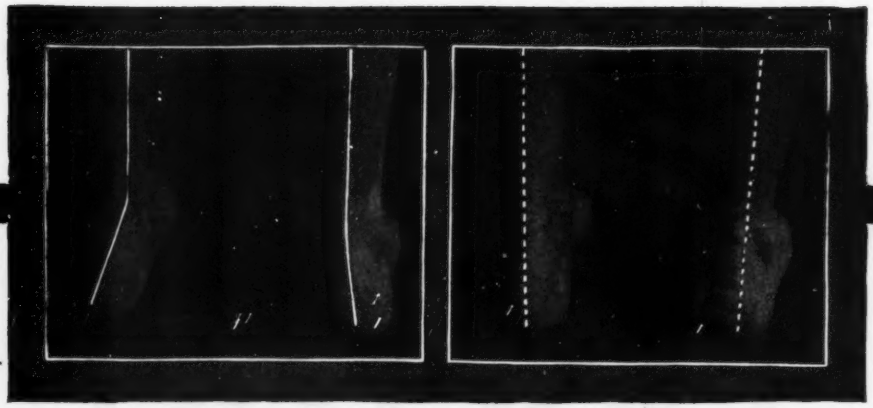

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THE COLLOIDAL GOLD TEST OF THE SPINAL FLUID.*

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The cerebrospinal fluid reacts to every disease process which affects the central nervous system and ,of all the changes that make their appearance in this body fluid as a result of pathogenic conditions of the nervous system, none are more interesting and important than those which can be classed as chemical. Of the chemical changes, those which involve the amount or type of protein are more clinically significant since in most conditions of organic nervous disease there is a definite increase in the protein volume, this increase usually varying with the severity of the disease and consisting both of globulin and serum albumin. In normal cerebrospinal fluid, the protein is small in amount and concerns mainly the globulin fraction. Hence, much study has been given the proteins of the spinal fluid and in 1912 Lange[1] endeavored to determine their nature by utilizing the earlier work of Zsigmondy[2] with other proteins upon a complex reagent known as "colloidal gold," which had been first prepared by Faraday[3] in 1857.

The colloidal condition may be defined as the condition in which an insoluble substance, so far as ordinary methods of observation and the common methods of separation (filtration, sedimentation, etc.) are concerned, appears to be present in actual solution; whereas, in reality, it is present as a suspension of finely divided particles. An extremely finely divided solid suspended in a liquid or an emulsified liquid suspended in another liquid are the most common types of such mixtures. Colloids are divided into two classes, suspensoids and emulsoids. The colloidal solutions of metals are typical suspensoids, being easily precipitated by the action of salts: of the emulsoids, protein colloids, starch and gelatin are types. A suspensoid colloid, as has been stated, is easily precipitated by the addition of an electrolyte (such as common salt), but if a small quantity of an emulsoid colloid is added to the suspensoid colloid solution the latter is much less easily precipitated; i. e., the suspensoid colloid (such as chloride of gold) is "protected" by the emulsoid colloid (albumin for example). This phenomenon is called "the protective action of colloids."

But when Lange attempted to apply this principle and the methods of Zsigmondy to a determination of the proteins of the spinal fluid, certain unexpected results occurred. It was found that whenever an abnormally large amount of protein was present in the spinal fluid, such as is the case in general paresis, the protein of the fluid, instead of protecting the gold, actually caused its precipitation and that this precipitation took place in a constant and characteristic manner and within certain dilution limits. It was further demonstrated that this

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precipitation was quite characteristic of fluids from paresis, spinal fluids from normal individuals not causing such change.

This is the chemical basis for the Colloidal Gold Test as eventually developed by Lange for clinical use, but much succeeding investigation has not entirely cleared up its precise mode of action. It is quite certain that it is a protein phenomenon,[4] the total protein content being an important factor and, from the work of Fulton,[5] it can be authoritatively stated that the gold reaction is a direct measure of the amount of globulin and indirectly of the albumin. Furthermore, it has been proven by Weston[6] that the gold precipitating substance and the Wassermann reacting substance are different and can be separated from each other quantitatively.[9 10] It is also explained[7] on the basis that both precipitating and protecting substances are present in pathologic cerebrospinal fluid, that the positive colloidal gold reaction is due to the precipitating substances and the curves in the different zones are brought about by varying amounts and proportions of the precipitating and protecting substances. Another explanation[8] takes the position that the precipitation of the colloidal gold particles, which carry negative electric charges, depends upon the presence of positively charged protein ions in the spinal fluid, that the color changes are accompanied by a parallel increase in the alkalinity and that this change in reaction is similar to that observed in the agglutination of bacteria by homologous immune serum.

The preparation[5] of the colloidal gold solution calls for considerable care and technical skill and, among other requirements, to be finally acceptable it must be absolutely transparent, of a brilliant orange red or salmon color, free from any trace of bluish tinge and, on the day of usage, neutral in reaction. The technic of the test itself is relatively simple, as follows:

Into the first of ten clean dry test tubes, which are used for no other purpose, put 1.8 c. c. of fresh 0.4 per cent sodium chloride solution and into each of the remaining tubes put 1 c.c. of the same salt salt solution. To the first tube is now added 0.2 c. c. of the spinal fluid to be examined and the pipette thoroughly washed by gentle suction with the mixture. Transfer 1 c. c. of the resultant 1 to 10 solution to the second tube and again mix thoroughly, and transfer 1 c. c. of this solution to the third tube. Proceed in like manner up to and including the tenth tube, discarding the extra cubic centimeter in the latter. By this method, a series of dilutions of the spinal fluid is secured in geometrical progression, ranging from 1 to 10 in the first tube up to 1 to 5120 in the tenth tube. Now add to each tube 5 c. c. of the colloidal gold solution, shake each tube separately and thoroughly and set aside at room temperature until the following day. The results are read at the end of twenty-four hours and the readings must be done by direct daylight.

In appraising and recording the results of the test, numbers are used to denote the various color changes which may occur, as follows:

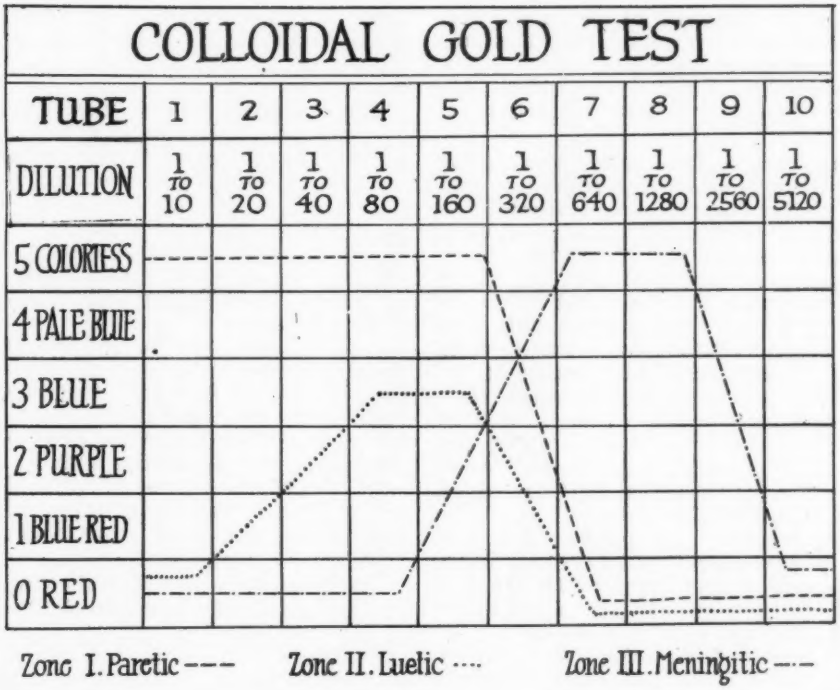
Orange red (unchanged)	0
Blue red	1
Purple or Lilac	2
Blue	3
Pale Blue	4
Colorless supernatant fluid with complete precipitation	5

With normal cerebrospinal fluid the original brilliant orange-red hue of the colloidal gold remains unchanged in all tubes, but the mutations of color are so constant in some pathologic conditions that certain zones (v. chart) have been described to classify the reaction types wherein they depart from the normal, viz:

Zone I. Paretic Zone. The greatest reaction is found in the first three to six tubes and is of the 5 type (complete precipitation). The color values fall rapidly in the remaining tubes to 0. Expressed, for instance, 5555552-100.

Zone II. Luetic or Syphilitic Zone. The greatest color change is in the fourth and fifth tubes, but is never greater than 4 or less than 3. Expressed in cerebrospinal lues, for instance, as 1223320000; for tabes as 0123110000.

Zone III. Meningitic Zone. The maximum color change occurs in the higher dilutions, perhaps beginning with the sixth tube. Expressed, for example, as 000003555 or 0000245-542.


COLLOIDAL GOLD TEST
TUBE 1 2 3 4 5 6 7 8 9 10
DILUTION 1 TO 10 | 1 TO 20 | 1 TO 40 | 1 TO 80 | 1 TO 160 | 1 TO 320 | 1 TO 640 | 1 TO 1280 | 1 TO 2560 | 1 TO 5120
5 COLORLESS
4 PALE BLUE
3 BLUE
2 PURPLE
1 BLUE RED
0 RED
Zone I. Paretic
Zone II. Luetic
Zone III. Meningitic

Following Lange's original investigations and the introduction of this test, a vast amount of work was done by many different observers with practical unanimity of opinion resulting that the use of the gold solution in the diagnosis of diseases of the central nervous system had a definite place and value. It was generally acknowledged[11] that a colloidal gold reaction typical for syphilis (luetic zone) was nearly constant in cases of syphilis of the central nervous system and that cases of paresis always gave the typical paretic curve.

The writer was so fortunate as to have a share in this earlier work and in 1915, conjointly with Weston and Darling, reported[12] a series of 198 cases of different psychoses (among which were thirty-four paretics and three cases of cerebrospinal lues with focal symptoms), upon whom were done 239 spinal fluid examinations with colloidal gold, paralleled by concomitant Wassermann reactions, cell counts, globulin and albumin tests. The conclusion was reached from this study that the colloidal gold reaction was apparently as reliable as the Wassermann test on the spinal fluid and in some instances, by reason of positive gold curve occurring with negative Wassermann in cases that were clinically luetic, seemed to point to the possible later appearance of a positive Wassermann in the suspected individuals. It is of interest to note that one of us (Weston)[13] subsequently reported a case bearing out this latter contention, showing a negative Wassermann reaction and a paretic gold curve on each of four occasions, but upon the fifth examination, one year and eight months after the first one, a strongly positive Wassermann reaction in the fluid was obtained. Occurrences such as this raise the question as to whether a gold reaction in the paretic zone is ever persistently found in non-syphilitics, and pertinent to such question is a recent

analysis[14] of over 200 cases of neurosyphilis in England in which the definite assertion is made that the positive colloidal gold reaction appears in the spinal fluid at an earlier date than the positive Wassermann reaction.

Southard and Solomon[15] sum up the present status of the colloidal gold test in the domain of neurosyphilis as follows: Fluid from cases of general paresis in the vast majority of instances will give a strong and fairly characteristic reaction and but very rarely give a reaction weaker than the characteristic zone. Fluids from cases of syphilitic involvement of the central nervous system other than general paresis often give a weaker reaction than the paretic curve, but in a fairly high percentage of cases give the same reaction as the paretics. Non-syphilitic cases may give the same reaction as the paretics, but these cases are usually chronic inflammatory conditions of the central nervous system. When a syphilitic case does not give the strong paretic reaction, it is presumptive evidence that the case is not general paresis and this test offers a valuable differential diagnostic aid between general paresis, tabes and cerebrospinal syphilis. They consider the term "syphilitic zone" something of a misnomer, since non-syphilitic as well as syphilitic cases give reactions in this zone, but no fluid of a case with syphilitic central nervous system disease has given a reaction outside of this zone, so that the finding may be used negatively; and any fluid giving a reaction outside of this zone may be considered non-syphilitic.

Among diseases other than syphilis whose spinal fluids cause a reduction of colloidal gold are chronic progressive inflammatory disorders of the nervous system, and mention should be made of multiple sclerosis in this connection, insomuch as the complete syndrome of this affection may often be given by syphilitic involvement of the central nervous system, though there is no etiological relationship. Disseminated sclerosis is associated with a positive gold curve, the type of which varies with the intensity and stage of the disease, but which is usually found [16] in the luetic zone, but occasionally attaining the paretic type.

An opinion from the viewpoint of ophthalmology has lately been expressed by Ferguson[17], who believes that the colloidal gold reaction is of undoubted value as indicating the first definite signs of organic disease of the central nervous system and should be applied particularly to young adults suffering from diplopia, optic atrophy or retro-bulbar neuritis. By its use, the question of the functional or organic character of a transient diplopia might be determined or help obtained in differentiating cases of retro-bulbar neuritis and optic atrophy, indicating those which are a part of a more general nervous disorder and more especially those which may be followed later by disseminated sclerosis.

Ranking next in importance to the reactions obtained in syphilitic disease of the cerebrospinal axis, is the type of reduction found in colloidal gold with the various forms of meningitis, the curve of which is so constant and distinctive as to have earned for itself the dignity of a special zone. In epidemic cerebrospinal meningitis and all forms of purulent or bacterial inflammation of the meninges (except that caused by the tubercle bacillus), the reduction occurs only in the higher dilutions of the last four or five tubes and is, as a rule, in the form of complete precipitation. But with fluids from tubercular meningitis, the height of the curve[18], while slightly variable, has been found more commonly between the meningitic and luetic zones, the maximum color change not exceeding a reddish or deep blue. This point of differentiation can conceivably be of not inconsiderable diagnostic aid in separating this disorder from the other meningitides. In cases of brain tumor or abscess, the reaction is proportional to and distinctive of the extent of meningeal involvement. The writer has seen one such case of large abscess formation, following cerebral hemor-

rhage as proven by autopsy, in which complete precipitation of the gold took place from the fourth tube onward. No characteristic colloidal gold curve is obtained[19] with the cerebrospinal fluid of epidemic (lethargic) encephalitis, but when a color change is presented it usually appears in the lower dilutions of Zone II.

The fluid of acute poliomyelitis has lately received much attention with the colloidal gold test and it seems to be well established[20] that there is always a reaction during the acute stage of the disease, and this takes place uniformly in the zone of low dilution, the so-called luetic zone, and that a return to normal reaction is never encountered before the end of the third week of the illness. With the gradual subsidence of the gold curve, there is[21] usually a corresponding improvement in the general condition of the patient, the paralysis and meningeal symptoms. If this holds true, the reaction should be of additional value in determining at what time the rest treatment of the inflammatory period may be terminated and more energetic measures by massage and electricity be instituted.

In the examination of the cerebrospinal fluid, the position of the Wassermann reaction is rightfully established, but too often a routine spinal examination is felt to be concluded by a Wassermann test or by the addition thereto of a globulin determination and cell count. The limitations of tests for excess globulin and pleocytosis are so numerous as to detract greatly from their value. Any infection of the meninges may give rise to an increased number of cells in the fluid. Furthermore, it has been shown by Mitchell, Darling and Newcomb[22] that the cell count varies greatly even in paresis and bears no relation to the mental or physical condition of the patient, a view which is in agreement with that of Warwick[23], Solomon and Koefed[24] and others. Increase of globulin has been found in the spinal fluids of non-syphilitic persons suffering from many different forms of insanity. It not only occurs in many organic nervous conditions, but also[25] in uremic and eclamptic attacks and in spasmophilic convulsions in children.

An effort has been made in the foregoing to present the colloidal gold test as a valuable diagnostic procedure in suspected derangement of the central nervous system. There is no one technical method that can be considered as absolutely final and the unsupplemented colloidal gold test is insufficient evidence upon which to base a diagnosis, but it is my belief that no cerebrospinal fluid examination for clinical purposes is complete without the use of the gold test.

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THE CORRECTION OF DEFORMITIES OF THE NOSE AND ABOUT THE ORBIT BY PLASTIC SURGERY*

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Plastic surgery is an ancient art. To Aulus Cornelius Celsus, a Latin physician and philosopher, who is supposed to have lived in the time of Augustus, do we owe our first authentic principles of the science. He introduced the Hippocratic system to the Romans, be being known as the Roman Hippocrates. His best work appeared in the De Medicena, the first edition of which was published in 1478 in Florence. One may find reference made to the art in the Sanskrit writing, and Susrata in his Ayur-Veda, the exact period of which is unknown, discloses the use of the rhino-plastic method. The art of plastic surgery seemed to have waned throughout the Middle Ages and remained practically unknown for a time, finally being revived in the fifteenth century by Branca, a Sicilian surgeon, who established a reputation by building up noses by using the skin of the face. Following Branca are to be found the names of many eminent surgeons throughout the world who have contributed much to the art.

During and following the World War, through the great influx of clinical material, great strides have been made due to the various injuries and disfigurements. Many new methods have been tried with varying degrees of success, and, due to the untiring efforts of some of the most capable surgeons, this branch of surgery is now a recognized art, applicable to the deserving who have suffered the wounds of battle, and not limited to satisfying the vanity of the less comely. It has taken the art out of the hands of the so-called beauty specialists and placed it on a firm and scientific basis, thanks to the efforts of some of our foremost surgeons, and serves as the surgeons' contribution to humanity.

It will not be amiss to discuss briefly a few of the fundamental principles which are confronted by those undertaking the field of plastic surgery, and to enumerate a few of the essentials that, if observed, may save one from many of the pitfalls and serve to further demonstrate the underlying principles which lead to success. It goes without saying that those venturing into the field of plastic surgery should be "disciples of Job," as patience and painstaking are two very essential factors. The desired results cannot always be obtained at one sitting, and the surgeon should be ever patient to wait and give nature a chance; a little at a time done well is far better than a gross attempt to accomplish the impossible at one sitting, which ofttimes spells failure and discouragement.

Plastic surgery is not what some may think; it is erroneously believed by many that it is a dramatic field filled with glamour. How often does such an idea culminate in tragedy, and the overzealous and hurried surgeon find that his labors have proved a failure. The temperament of the operator is of importance; here an artistic temperament is the sine qua non, for the ability to create and build lends itself admirably to this branch of surgery, for in reality the surgeon but attempts to rebuild as artistically as possible that which has been destroyed, or faultily cast by nature. The light touch of the surgeon is a quality which should be developed, the ability to use instruments whenever possible without resorting to digital manipulation will often prove a valuable asset, especially in the handling of skin-grafts. The value of tissue conservation by the careful preserving of all tissue is a point that cannot be too largely stressed. Rough handling and tearing of tissue hinders nutrition, favors necrosis and increases the chances of secondary infection.

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We must not, in an attempt to correct deformities, create or leave behind us blemishes equally as gross in appearance. We should endeavor to secure careful approximation of raw surfaces with as little tension as possible, by using the finest suture material, preferably catgut for cutaneous sutures, as it is the least irritating, and control hemorrhage by pressure when possible, thus avoiding the burying of sutures which may act as a bed for bacteria; (this does not apply to the control of bleeding from large vessels; when necessary catgut is preferable because it is absorbed).

Grafts placed in their new position should lie in their new place with the least possible tension, with thorough coaptation of edges. The free use of relaxation sutures should be used (subcutaneous sutures to relieve tension). The lack of proper asepsis and faulty judgment on the surgeon's part are often the causes for a large number of failures. Foci of infection, when existing, should be first dealt with and cleared up before attempting operative procedure. This, I think, holds good in plastics on any part of the body, and is especially true in plastics about the head and face. One would surely not attempt to perform a plastic operation on the nose when the patient is known to have an infected sinus, nor would one attempt a plastic operation about the orbit when the lacrymal gland or sac is infected. It, therefore, holds good that these various foci of infection should be searched for, and cleared up before operation is undertaken. It is also important to search for constitutional conditions such as syphilis and tuberculosis, and, if possible, to eliminate these conditions with proper therapy. Having observed the foregoing, one can obtain the desired result in the majority of cases.

In the correction of the various deformities of the nose where grafting is essential for the formation of the support of the bridge a variety of material has been used, all of which have proven unsatisfactory with the exception of two; namely, cartilage and bone. As to which of these is the better I shall not argue, as both have been used successfully in the hands of certain operators. When bone is used in rhino-plastic surgery it is usually procured from the rib, tibia or ilium, although I believe a portion of the scapula has been advocated in certain cases (Blair)[1], as well as the third digit in other cases where there has been total loss of the nose. The turbinate bones (middle and inferior) have also been used with some success in depressed or saddle nose. In cartilage grafting the cartilage of the seventh, eighth or ninth rib or zyphoid offers the selective sites for procuring the graft. In all instances, whether in the use of bone or cartilage, it is important to preserve as much of the periosteum or perichondrium as possible. The proper approximation of raw surfaces and the fixation of the graft must be assured. This may be accomplished by suture, splints or pressure bandages, all of which have their places. In superficial scars of the nose an attempt should be made to procure a graft from some part of the face so that it will match as near as possible the skin of the nose. An adequate amount of skin can be taken from the upper eyelid, which is an excellent match and leaves no disfiguration following its removal. If the area is too large to remove a sufficiently large graft from this spot, the temporal graft is fairly adaptable and the shrinkage is very slight. If it is necessary for a still larger graft I use the outer side of the thigh, using Thiersch's graft when possible.

The deformities of the nose encountered are varied; the hooked nose, the overhanging tip, the saddle-backed nose, the African nose, and lateral deformities and exostosis. Each in itself presents a distinct mechanical problem to tax the ingenuity of the surgeon who, before attempting operative procedure, should examine the case from all angles, thoroughly search for the etiological variation from normal and carefully consider the mode and method for the correction of the deformity. Anatomical variations, due to traumatism should be separated from those changes re-

sulting from constitutional disease, such as syphilis. Diseased conditions of the paranasal sinuses should be sought for, and rigid treatment carried out before undertaking operative procedure.

The choice of the anesthetic is of no great importance, local or general may be used with equally good results; however, I am frequently in the habit of leaving this question to the decision of the patient. I will briefly outline the operation as performed under local anesthesia. The operative technic is applicable to all forms of deformities. The patient is placed in a semi-recumbent position, and draped for operation. The cilia at the nasal vestibule are clipped with fine scissors. The mucous membrane of the nose is painted with 10 per cent solution of cocaine, to which is added a few drops of adrenalin chloride. The external nose is then painted with tincture of iodine, which is carried well over both cheeks, up between the eyes, and down over the upper lip, and the excess removed with alcohol. The next step is the cleansing of the interior of the nose; a swab of pure alcohol is inserted into each nostril and passed over the mucosa. The injections are then made, a half of 1 per cent novacain solution is injected subcutaneously beneath the mucous membrane covering the septum. This is done first on one side of the septum and then on the other. The needle is then inserted in the region of the lateral cartilages, where further injections are made. The attention is next turned to the anesthetization of the external nose, where four injections are made; No. 1 directly over the bridge of the nose; No. 2 directly on the tip; No. 3 and 4, respectively, on either side of the nose, well out over the maxillary bones. Although incisions of the nose heal rapidly, the internal route is preferred as it leaves no scars and no external sutures, which is important for cosmetic reasons, and the incisions described make it possible to correct all types of defects.

The surgeon begins by making an incision along the pyriform opening of the nose; beginning at the nasal bone, the incision is carried downward and outward through the mucous membrane and chondro-osseous junction. A periosteum elevator is passed through this incision and inserted between the periosteum overlying the nasal and maxillary bones, and the bones are swept mesially and laterally, separating periosteum, subcutaneous tissue and skin from the bone. This freely liberates the entire area extending from the root of the nose over the nasal bones and superior maxillae. A second incision is then made beginning at the lower end of the nasal bone; it is carried downward and forward along the anterior edge of the septum to the tip of the nose. This incision is parallel to the bridge of the nose, and is carried through the cartilage up to the perichondrium overlying the nasal bridge; then by means of dissection the perichondrium and soft tissues over the bridge of the nose and lateral cartilages are separated from the underlying bony and cartilaginous septum and lateral cartilages. A third incision is made from one nostril to the other; starting at the tip of the nose at the end of the second incision, it is carried backward along the lower border of the quadrilateral cartilage to the nasal crest of the superior maxillary bone and through the mucous membrane and cartilage. The fourth incision is made through the lower lateral cartilage at the point where the cartilage bends upon itself. Having completed these incisions, one is able to correct all types of nasal deformities.

Saddle Nose or Fallen Bridge: The operative procedure in this case depends upon the elevation of the nasal bones, together with a graft of either rib cartilage trimmed to the desired size, or a portion of a turbinate bone. A chisel is introduced into the nose, and the nasal bones are detached freely from the frontal process of the superior maxillary bones and from the nasal process of the frontal bone. Elevation is then made sufficiently to raise the bridge of the nose; a piece of rib cartilage or turbinate bone, de-

nuded of all save its periosteum and trimmed to the proper size, is then inserted between the anterior side of the bony septum and nasal bones, and is maintained in place by means of a padded metal splint and adhesive plaster. Within three or four days the graft becomes fixed, and in four weeks, as a rule, there is complete organization.

Humped or Crooked Nose is corrected by means of the saw and rasp operation. The nasal bones are shaved down to the proper level, and the protruding bony and cartilaginous septum trimmed off with scissors or scalpel. The overlying skin is then moulded into position to overcome the widening which frequently results after the removal of the hump. By means of forceps the remaining portions of the nasal bones, with the frontal processes of the superior maxillary bones, are forced inward into the desired position; the splint is then applied externally to maintain them in place.

Lateral Dislocations: Before attempting to correct this type of deformity a resection of the anterior part of the bony septum should be performed; this accomplished, the nasal bones together with part of the frontal processes of the superior maxillary bones can be dislocated by means of a chisel and then swung in the median line. Great care should be taken in exerting side pressure for fear of possible fracture of the cribiform plate of the ethmoid. The results achieved will depend largely, not only upon the proper observance of asepsis during operation, but also upon the care of the nose during the convalescent period.

In performing *plastics about the orbit* I will not touch upon the cases where there has been loss of bony structure, but will limit my discussion to those resulting from the loss of the sofe tissues through disease of the part, trauma, post-operative deformities and congenital defects. As to the type of skin graft used in these cases I will refrain from argument knowing the value of both detached and pedicle grafts, both of which have their places in the armamentarium of surgery depending upon the type of case under consideration, and the extent of destruction of the soft parts. However, after observing such men as Dr. John Wheeler of New York accomplish such marvelous results with detached grafts it has led me, through observance and experience, to yield to this type of skin grafting when possible. When making this statement I mean whenever there is not too large an area to be grafted, and when the destruction of tissue has been superficial. The reason for preferring the detached graft in a case when it can be used I will explain.

In the use of dermic and epidermic grafts the viability of the graft depends principally upon its contact with the underlying raw surface, and if a thorough approximation of surfaces is obtained the graft will successfully take. The approximation of surfaces is secured largely by the graft being of the proper size, it being retained in place by sutures with as little tension as possible, by the application of pressure bandages and in certain cases dental stent. In securing epidermis by the pedunculated method it is often a difficult task, and may be very disappointing, for the reason that in the use of either dermic or epidermic grafts the nutrition of the graft is largely dependent upon the pedicle. The pedunculated flap must be thick and the attachment of the graft in place by sutures throws tension on the vital point, the pedicle, which may through passive congestion, lead to necrosis and ultimate loss of the graft. The important points are then, how are we going to secure absolute approximation of raw surfaces and prevent at the same time hemorrhage and the formation of a hematoma. This is important so that the graft will take.

First, both the approximation of surfaces and the prevention of hematoma may be avoided by firm pressure dressings supported by adhesive tape. These pressure bandages should be maintained in place four or five days following the operation, at the

end of which the dressing is removed and the graft inspected. White, anemic places in the graft makes one suspicious of necrosis. The second method of securing the proper approximation of surfaces is by the use of dental stent and is applicable particularly to those cases where there is a desire to skin-graft the conjunctival sac, middle ear or mastoid cavities. This method is based on the transmission of the epithelium by the aid of stent. The stent is placed in hot water where it becomes soft, it is then removed and allowed to partly cool, formed to the desired shape and placed in the cavity that is being grafted. An impression is made of the cavity and the stent is allowed to harden, it is then removed from the cavity and the graft is spread over the stent, completely covering the stent raw surface outward and making sure that there is no curling of the edges of the graft. The stent form, with the graft covering, is then gently slipped into place and an approximation of raw surfaces is obtained. This is allowed to remain varying periods from one to three weeks depending on the cavity that is being grafted.

As to the site preferable for procuring the graft in plastic surgery about the orbit, it applies here as it does in any part of the face, that the skin from a near-by region furnishes a better match than does skin transplanted from remote parts of the body (this does not apply to grafting in orbit, ear or mastoid cavities). Therefore, in small defects, such as cicatricial ectropion or the like, the dermic graft from the upper lid as suggested by Wheeler is preferable, because of its likeness to the surrounding parts and there is no resulting deformity following the removal of the graft. Next comes the temporal region which offers a very good match although some allowance should be made for shrinkage. In epidermic grafts the outer portion of the thigh or the flexor side of the fore-arm are the sites-of-selection.

In outlining the various operative procedures for plastics about the orbit I will follow largely the technic of Wheeler[2] and used by me. I will first describe the operation for the correction of a simple cicatricial ectropion, a condition that is frequently encountered by all of us, especially those practicing ophthalmology. In this condition the lids, more commonly the lower lid, is pulled away from the globe as a result of scar tissues and it frequently happens that only one lid is involved, usually the lower lid.

The technic of operation for the correction of the resulting deformity is as follows: An incision is made parallel to the distorted lid margin, all scar tissue is thoroughly dissected away and hemorrhage controlled by pressure. It is necessary here, after completing the primary dissection, to dissect up small portions of epithelium on the upper and lower lid margins, carrying mattress sutures through the raw surfaces. These sutures are passed through small pieces of cut rubber tubing, overlying the skin of both upper and lower lids near their margins. The sutures are tied so as to secure apposition of the opposing raw surfaces. This results in the formation of adhesions between the two lids which causes a support of the lower lid. The skin graft is then taken, preferably from the upper lid. Sufficient skin can easily be obtained from this site to make an ideal inlay of true skin. No allowance need be made for contraction when this graft is used. A fusiform or semilunar shaped design is convenient, and is removed with a small scalpel or cataract knife, avoiding the handling of the graft as much as possible. When the graft is removed all fragments of subcutaneous tissue are snipped off with scissors and the graft is set in place. Fine horse-hair or paraffin silk sutures are used for its maintenance in the proper position. A pressure dressing is applied, first using a small piece of rubber tissue impregnated with sterile vaseline over which are placed gauze fluffs which are held in place by adhesive plaster and a pressure bandage. The dressing is removed after the fifth day and

the graft cleansed with a mild solution of boric acid. The sutures are removed at the first dressing. The wound is dressed every other day for the period of a week. In about three weeks after operation light massage with sterile vaseline is advised. The adhesion between the two lids is allowed to remain for two or three months, after which it is cut with scissors leaving no deformity.

It frequently becomes necessary to restore the cilia line, or a part of the cilia line, of one of the lids. In this case the preferable site of securing a graft is from the nasal end of the under surfaces of the eye brow, or, if the whole cilia margin has been lost, to slit the eye brow by a longitudinal incision and to remove half the brow or sufficient quantity to completely restore the cilia line. In suturing the graft in its new position it is of advantage to invert the graft so that the hair on the graft will match as near as possible the cilia of the opposite lid. The same precautions are adhered to in this operation as previously described under the correction of cicatricial ectropion.

It frequently happens that the surgeon is called upon to restore an obliterated eye socket. The operation for the correction of this deformity I will briefly describe. After thoroughly cleansing the cavity and preparing the field of operation, the lid margins, if adherent, are separated by an incision. In dissecting, the operator should endeavor to separate the lids from the orbital contents. The dissection must be kept superficial and avoid carrying the dissection back into the orbital tissue, which often causes failure. Dissection should be carried temporally and below well under the orbital margin, as the graft must adhere to the periosteum and anterior aspect of the orbital margin. On the nasal side the dissection should be carried to the anterior crest of the lacrymal groove and well up to the orbital margin above. The caruncle should be preserved, if not already destroyed, as the graft will adhere to the posterior surface of the caruncle and furnish it with a permanent lining. In division of the tissues above, the dissection should be carried beyond the orbital rim, if necessary to the roof of the orbit before placing the graft, and the place of cicatricial and granulation tissues should be removed. The lid margins should not be too thick; if necessary, remove a portion of the tarsus allowing enough tarsus to remain to support the cilia. At this stage dental stent is immersed in hot water for a period of thirty seconds, then removed and allowed to partly cool. It is then slipped into the socket where an impression is taken of the cavity; after allowing time to harden it is removed. The operator now turns his attention to the securing of the skin graft, and epidermis is probably the most satisfactory tissue for lining, the cavity being free from an excess of oily secretion and hair.

A Thiersch graft is taken from the lateral aspect of the thigh. Enough skin is taken to completely cover the dental stent, raw surface outward, making sure that there is no turning in or curling of the edges. The average graft usually measures from 3½ to 4 inches in length by 3¼ inches in width. The form with the graft covering, is gently slipped into the socket, the overlapping edges of the graft being placed forward, the lids are then closed and a pressure bandage, reinforced with adhesive tape, is applied. The dressing is changed in from five to seven days, the form being left in place for twenty-one days when the stent is gently removed allowing the graft to remain behind. If there has been a successful taking of the skin graft, the result will be a permanent eye socket completely lined with epidermis which furnishes a fair stump for an artificial eye. The artificial eye may be put in any time within two or three weeks after the removal of the stent.

At times we are called on to correct deformities of the upper lid either resulting from a wound or associated with ectropion. Usually in the deformities there is an involvement of the skin, conjunctiva, muscle and tarsus. When deformities are

not too large the punched out or notched area can be repaired very satisfactorily by the "Halving Operation."[3] All scar tissue is excised, the tarsus is identified and cut clean so as to give a firm approximation of the edges, equal amounts of tarsus are removed at the upper and lower margins. The skin and orbicularis are cut so as to form a flap on one side and a rectangular area of tarsus is exposed on the other side. If the eye ball has been removed a canthotomy must be performed and a portion of the external canthal ligament severed to release the tarsus. This done the tongue of skin is trimmed enough for adjustment, and a small triangular piece of skin may be removed above to avoid puckering. The conjunctiva and tarsal flaps are first sutured, a mattress suture being passed through the flaps and tied, after passing it through a small piece of rubber tubing. Sutures are introduced in the skin to give apposition to the skin flaps. The mattress sutures are removed on the fourth day and the skin sutures on the sixth. The tarsal wound and skin wound should never be in the same position but should be placed in such position that there is no lapping, for here lies the secret of success in this operation.

In concluding, we may briefly sum up the important points to be considered in the application of plastic surgery for the correction of the various deformities of the nose and about the orbit:

1. The surgeon should search for the underlying causes of the deformity.
2. He should be familiar with the anatomy of the part to be corrected.
3. Thorough attention should be given to the importance of primary eradication of all foci of infection.
4. The constitutional condition of the patient should be thoroughly understood and where syphilis or tuberculosis is found proper therapy instigated.
5. The avoidance of creating new disfigurements in an attempt to correct those already existing.
6. Judgment in selecting sites for securing skin grafts; the advantage of securing skin that matches the surrounding parts when possible.
7. The control of hemorrhage by pressure rather than by burying sutures.
8. The avoidance of roughly handling the tissues by either digital or careless instrumental manipulation.
9. Rigid asepsis and surgical technic.
10. Patience on the part of the operator; the surgeon should not force too much at one sitting. Nature should be given a chance, also remembering the dictum of Gillies, "Time is the greatest ally of the surgeon."

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HODGKIN'S DISEASE—WITH CASE REPORT.*

DR. W. A. HOLT, Globe, Arizona and DR. W. B. WATTS, Miami, Arizona.

DEFINITION

Hodgkin's disease is characterized by enlargement of the lymph glands and sometimes of the spleen, progressive secondary anemia, emaciation and weakness. These symptoms are definite and constant.

Added to the above are the inconstant but frequently present symptoms of cough, digestive disorders, and disturbances due to pressure.

HISTORY

The history of Hodgkin's disease is quite an old one, very interesting, and the literature is rather voluminous, due to the fact that its similarity to several other diseases having many

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like symptoms made the diagnosis uncertain.

The disease was first described in 1832 by Thomas Hodgkin, an English physician.

ETIOLOGY

Age seems to be a factor, it being a disease of young adult life primarly although cases are seen as late as the sixth decade. The great majority of cases occur between the ages of 20 and 35. Males predominate (65%).

The many specific causes that have been considered—extending over several decades—have, one after another been feebly accepted or rejected. Early, and for many years, it was accepted as being of tuberculous origin, i. e., a glandular tuberculosis. For a long time it rode as a leukemia or pseudo leukemia. Because of the histological resemblance to sarcoma pathologists were about evenly divided between Hodgkin's disease and sarcoma.

In 1910, Frankel found an organism resembling the tubercle bacillus. In 1913, Negri confirmed the findings of Frankel but stated that the organism was not related to the tubercle bacillus but was a diphtheroid organism, which was also isolated from the lymph glands in 12 cases of Hodgkin's disease by Billings and Rosenau.[4]

In the last few years the finding of this diphtheroid organism in cultures made from various glands in conditions other than Hodgkin's disease, plus negative results obtained in many reports of animal injection, leads to the belief that the diphtheroid bacillus is not the specific cause of Hodgkin's disease.

The work of Kofoid, Sweezy and Boyers[1] of the University of California, dating from October, 1921, leads very strongly to the possible etiological factor being the endameba dysenteriae. They have demonstrated this organism in the tissue of glands and in stools of patients having Hodgkin's disease.

SYMPTOMS

May be acute or chronic.

The symptoms prior to the appearance of the glandular enlargements are very indefinite and intangible, the patient complaining of weakness, loss of weight, with possibly a disturbance of digestion, slight cough and a secondary anemia.

I feel that, at this stage of the disease and prior to the appearance of the enlarged glands, it is almost impossible to make a correct diagnosis. Now, however, with a new etiological factor having been introduced by Kofoid in the form of amebiasis, the finding of amebae in the stools will be of great assistance in making the diagnosis.

PATHOLOGY

Enlargement of one or more groups of lymph glands always occurs, forming lobulated masses composed of discrete nodes bound together by connective tissue. They seldom fuse. They may be soft or hard. They may give a sensation of fluctuation, but on incision no fluid is found. They are not adherent to the skin or adjacent structures and are freely movable under the skin unless by their size they have stretched the skin too tightly over them to permit of motion. Necrosis occurs only when secondary infection occurs.

The macroscopic appearance on section of the older growths is a semi-translucent, grayish surface divided by intersecting lines of yellowish fibrous tissue. The younger growths present a uniform, grayish, bulging surface, somewhat more opaque than the normal gland structure.

Microscopically, Ewing,[2] in his text book on Neo-plastic Diseases, says, "The structure shows diffuse cellular hyperplasia with varying proportions, sometimes excessive, of proliferating endothelial cells, endothelial giant-cells, plasna-cells and eosinophile leucocytes. Whele there are numerous variations in the proportions of these cells, especially of the endothelium, the typical picture of Hodgkin's granuloma with the confusion of so many cell forms is unmistakable, is very probably caused by a single agent, and forms a rational basis for classification of many obscure cases of clinical lymphomas."

DIAGNOSIS

This is often difficult to establish without a histological study of an excised gland; in fact a diagnosis of Hodgkin's disease canot be considered positive without an examination of gland tissue. It is not uncommon for Hodgkin's disease and tuberculosis to be associated.

Lymphoid leukemia may be confounded with Hodgkin's disease. A blood examination, including a differential count, will be of great assistance, remembering that there is frequently an eosinophilia, also a leucopenia in Hodgkin's disease. The secondary anemia, plus the differential count, taken with the other findings such as possible amebae in the glands or stools, plus mediastinal and abdominal shadows as shown by the x-ray, are very valuable in arriving at a diagnosis.

PROGNOSIS

The prognosis of today is quite different from that of one and two decades ago. The prognosis of two or more decades ago, as given in the older works, was that as far as known Hodgkin's disease was always fatal, patients rarely living more than three years. Whereas today the prognosis is much more favorable, due to an earlier diagnosis, a better treatment and a little better conception of possible etiology.

TREATMENT

Removal of the source of infection is the first step. If the infection is primarily in the neck, the tonsils, nose, teeth and accessory simuses should be thoroughly investigated. In all neck cases the tonsils should be suspected and a complete tonsillectomy done.

Other lines of treatment, all of which are very important, x-ray, radium, intravenous medication in the form of iron and arsenic and emetine hydrochloride, should be used as indicated.

Lemon and Doyle[3] of the Mayo Clinic say that treatment by the roentgen ray probably offers most in mediastinal complications. It results in a replacement by connective tissue and a diminution in the size of the glands. This is particularly true of glands that are still soft and have not passed into the fibrous stage.

The following case came under my observation in October, 1922:

Male, age 17; weight, 114.

Family History: Mother died of pulmonary tuberculosis in 1910, otherwise family history good.

Past history of patient is of negative importance. He had pneumonia at the age of four years. Has had several attacks of la grippe. Never has had an attack of tonsilitis.

Present illness began in August, 1922. The first symptom was drowsiness coming on late in the afternoon, and by the latter part of September he began having a little rise of temperature in the evening with loss of weight and strength. Presenting himself to me in October, he had the appearance of being very ill, i. e., thin, pale and weak; complaining of considerable cough. Chest examinations negative. Such secretion as was expectorated was negative for tubercle bacilli, on many examinations.

In October he stayed in bed for two weeks and his general condition improved, but weakness, vertigo and shortness of breath soon reappeared on exertion.

November 1st, appetite began to fail and he lost weight steadily. The latter part of November he developed a cold and cough which lasted until Christmas.

During this time his chest received most of our suspicion and attention, however, nothing could be determined in his chest and sputum continued negative. Blood Wassermann was negative.

Early in January he noticed a lump the size of a marble, in right side of his neck. By February 1st it had trebled in size and several more had made their appearance as cervical nodes in the anterior triangle.

February 3rd, admitted to hospital for observation, at which time pulse was 90 to 110.

Temperature, a. m., 97.4; p. m., 101.

Weight, 104.

Heart, normal; spleen, not palpable; urine, negative.

BLOOD EXAMINATION

Hemoglobin 46%.
Color Index 1.3
Red Blood Corpuscles 1,780,000.
White Corpuscles 6,300.
Polys 57%.
Lymphocytes 23%.
Lymphocytes irritation form 6.
Monos 3.
Eosinophiles 2.
Transitional 9.
Blood Culture, negative.
Blood Pressure 92/60.

X-Ray: The superior and middle mediastinum contains large, discrete bosselated masses, lying mostly on the right side, however, there were a few small masses on the left side.

On February 4th, an enlarged gland was removed from the neck and submitted to two

different laboratories, both making a report of Hodgkin's disease.

Treatment of this case was started on Feb. 8th by intravenous injections of iron and arsenic and subcutaneous injections of emetin hydrochloride.

X-ray treatment was begun on Feb. 18th and continued up to and including May 31st, by Dr. Wm. B. Watts. The following factors were used throughout the entire treatment:

Voltage—95 kv. (corresponding to 8½" spark gap).
Focal skin distance—8 in.
Filter—4 mm. Al.
Milliamperes—5.
Time—5 mins.

Nine treatments were given, the first five at intervals of seven days, the next three at intervals of fourteen days, and between the eighth and the last treatment four weeks elapsed. Six portals were used over the supraclavicular regions and anterior chest; four portals over the posterior chest and two each over right and left lateral chest wall and axillary regions.

Improvement was immediate and pronounced as shown by the following blood pictures and gain in weight and strength:

Feb. 1st—Red cells, 1,780,000; white cells, 6,300; hemog., 46%; index of 1.3; weight 104.

Feb. 18th—X-ray treatment through right supraclavicular region and entire anterior chest.

Feb. 25th—X-ray treatment through left supraclavicular region and entire posterior chest.

Mch. 1st—X-ray treatment through right axilla and right lateral chest. Weight, 114 lbs.

Mch. 7th—X-ray treatment through left axilla and left lateral chest.

Mch. 14th—X-ray treatment through entire anterior chest and supraclavicular regions.

Mch. 15th—Red cells, 3,520,000; white cells, 7,750; hemog., 60%; index of .8.

Mch. 28th—X-ray treatment through entire posterior chest.

Apr. 6th—Red cells, 4,220,000; white cells, 5,100; hemog., 68%; index of .8; weight, 132 lbs.

Apr. 11th—X-ray treatment through right and left axilla and lateral chest walls.

May 2nd—X-ray treatment through entire anterior and posterior chest.

May 4th—Red cells, 4,290,000; white cells, 4,800; hemog., 76%; index of .9; weight, 140 lbs.

May 31st—X-ray treatment through entire anterior and posterior chest.

June 1st——Weight, 135 lbs.

June 10th—Red cells, 4,400,000; white cells, 4,750; hemog., 79%; index of .9.

There was immediate decrease and early disappearance of the glandular enlargement of the neck and mediastinum as shown by radiographs.

CONCLUSIONS

1. The history of tuberculosis, either personal or familial, is of no significance in the diagnosis of Hodgkin's disease.
2. That the almost constant condition of leukopenia being present would minimize the probability of it being of an infective character through the channels of the mouth, teeth or tonsils.
3. A study in all cases as suggested by Kofoid[5] along experimental and therapeutic lines to establish the conclusion that Hodgkin's disease is amebiasis of the lymphatic system.
4. That the subject of Hodgkin's disease or malignant lymphogranuloma is far from being settled.

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PRIMARY CARCINOMA OF THE APPENDIX*

E. B. ROGERS, M.D., El Paso, Texas.

Primary carcinoma of the appendix occurs with sufficient frequency that the report of a single case would hardly be justifiable were it not for the fact that the pathology of this tumor presents interesting features and questions regarding malignancy that should call for the record and outcome of every case. Statistics from various sources indicate that carcinoma-like tumor of the appendix occurs in something less than one-half of one per cent of all removed appendices. The percentage is higher in the United States than in foreign countries, probably due to more thorough microscopical examinations, since many appendices that appear normal to the eye show carcinomatous change under the microscope.

HISTORY: The first case of carcinoma of the appendix was reported in 1838,[1] the second nearly 30 years later. Following this time, up to 1900, several cases were reported, but the status of most of them is in doubt, since there was only one histological examination. For example, four cases by Rokitansky[2] called colloid carcinoma, but not examined microscopically, were probably mucous cysts. Kelly[3] in his text-book on the appendix, in 1911, states that 49 cases were then on record, 30 of which had been described microscopically. The remaining 19 cases are doubtful, due to incomplete examination. It is interesting to note that during the past ten years cases have been reported with increasing frequency. At the present time several appear each year.

ETIOLOGY: There has been much speculation regarding the cause of these tumors. It has been variously estimated that they occur coincidentally with chronic appendicitis in from 50%[4] to 85% of cases. This again is difficult to estimate, since no tumor of the appendix has been diagnosed before operation. The symptoms have invariable been those of a chronic appendix, or a chronic appendix with a more or less acute exacerbation. Either condition might precede and cause the other and the history of certain cases, together with a study of the pathology found seems to indicate that either course may be followed. It is interesting to speculate as to the influence that chronic appendicitis may have in causing tumor. We find all degrees of chronic and obliterative appendicitis. A fragment of mucosa left after a destructive inflammation may be the focus of origin of a tumor, or tumor may result from the continued irritation of a chronic or recurrent inflammatory process.

PATHOLOGY: The tumor is located in the tip of the appendix in about 60% of cases.[6] In size they vary from a small nodule recognized in one-half the cases only after the appendix is opened[7] and frequently only on microscopic examination, up to a diffuse tumor infiltrating the whole organ. Extension of the tumor beyond the appendix has been found in 6% of cases.[8] This occurs most frequently into the mesenteric and retroperitoneal glands, but may occur by direct extension into the mesoappendix or peritoneum. Occasionally the tumor extends into or from the cecum and difficulty is experienced in determining where it originated.

HISTOLOGICALLY these tumors divide themselves readily into two classes:

I. 1. Columnar cell carcinoma—
   2. Adeno-carcinoma 20%
   3. Colloid carcinoma—
II. Spheroidal cell carcinoma....70%
III. Transitional forms.....10%

1. Columnar cell carcinoma with small or large alveoli, adeno-carcinoma with or without mucoid degeneration, colloid carcinoma; i. e., the same forms of cancer that are found in the other parts of the intestinal tract. These tumors occur usually beyond the age of 45, form extensions or metastases and are malignant. They form about 20% of the tumors of the appendix.

(Read at meeting of El Paso County Medical Society, October 2, 1922.)

2. Spheroidal cell alveolar carcinoma. The cells are grouped in small or large alveoli, polygonal or spheroidal in shape, and frequently have mucoid degeneration. The nuclei are large, stain deeply and have the appearance of a basal-cell carcinoma. The stroma may be either abundant or scanty. These tumors are relatively benign, as the patients usually continue in good health. About 6% result in malignancy. They form about 70% of tumors of the appendix.[9] The remaining 10% are transitional forms in which the pathology is not sufficiently clear for classification.

CASE REPORT. In view of these characteristics and with the hope that some small benefit may result in the way of clearing up diagnosis or pathology, the following case is recorded:

Mrs H., age 35, American, married. For about a year she had had attacks of colicky pain and tenderness in the region of the appendix, but as she objected to employing a physician when ill, no medical advice had been sought. The present attack had lasted about one week with gradually increasing severity of pain and tenderness. In spite of repeated cathartics and frequent watery evacuations she had a feeling that the bowels had not moved and her first request was that the constipation be overcome. On examination a diagnosis of appendicitis was made, but she refused to consider operation. That night at midnight she requested an opiate. In the morning her pulse was 90, temperature 99. Local pain and tenderness increased. No vomiting. The blood gave 16,200 white cells, with 89% polynuclears.

She now agreed to operation, and a large inflammed appendix, one inch in diameter and four inches in length, but constricted at the base, was removed through this constriction. It had the appearance of inflamed ileum and a visiting physician suggested that we were trying to remove a portion of the bowel.

On being opened longitudinally the proximal ½ was found to be composed of a solid white tumor mass about ¾ by 1¼ inches in size. It could be shelled out of the appendix wall without difficulty. The distal two-thirds was an abscess cavity filled with thin yellow pus. (Fig. 1.) In the wall of the appendix could be seen white lines or striae which had the appearance of a portion of the tumor breaking through. The meso-appendix was thickened. On examination both these structures were found to be free from tumor cells.

Fig. 1. Cross Section of Appendix

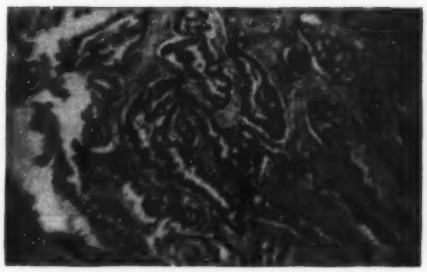

Fig. 2. Microscopic Section of Appendix

Microscopically (Fig. 2) the tumor was found to have the structure of carcinoma. It is composed of alveoli, both large and small, and a moderate amount of stroma. The alveoli are lined and filled with polygonal epithelial cells.[1] Some of the larger alveoli are largely filled with mucoid degeneration and have only scattered cells. These cells have somewhat the appearance of endothelioma and have evidently been so designated by some authors.

There is still much disagreement regarding these tumors, as some pathologists contend that they are not carcinomata at all. The weight of opinion seems not to favor such a conclusion, however, for it is based upon the one point that the tumors are benign. On the other hand the tumor structure is typically that of the carcinoma and several cases, about 6%

of those reported, have caused death by metastases. The location of a tumor in an organ of small lumen where it will produce symptoms that call for early operation is no doubt largely responsible for the greater benignity. Again, a tumor that is schirrus in nature is of a lower grade of virulence than the columnar celled tumor or adeno-carcinoma of the bowel.

SUMMARY: The interesting facts connected with carcinoma of the appendix may be summed up as follows:

1. The tumor occurs in slightly less than one-half per cent of all removed appendices.

2. It has been found at all ages from 5 to 70, but most frequently in the third decade.

3. Over two-thirds of the cases have been in females. Possibly the usual custom of removing the appendix during gynecological operations may account for this, since about two-thirds of the cases of appendicitis are in males. This would seem to indicate that pre-existing inflammation of the appendix may have little to do with the etiology of tumor.

4. No pre-operative diagnosis of tumor has been made. The usual diagnosis is acute or chronic appendicitis. The case reported simulated appendiceal colic but gave a leucocystosis due to retained pus.

5. The pathology of the tumor has created many differences of opinion. As time passes and more cases have been followed to their termination more of them have been found to have developed metastases. However, the number is still so small that, while it proves the tumor a carcinoma with reasonable certainty, the fact remains that it is clinically the most benign of the histologically malignant tumors with which we have to deal. For this reason we hope that the prognosis may be considered good even in this case reported, where the tumor had reached a considerable size.

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DOES PUBLIC HEA TH WORK PAY?*

DR. W. A. EVANS, Professor of Hygiene, Northwestern University, Evanston, Illinois.

As announced in our last issue, Dr. Wm. A. Evans, Professor of Hygiene in Northwestern University, formerly Health Commissioner for the City of Chicago, gave a popular lecture, under the auspices of the El Paso County Medical Society, at the Scottish Rite hall, El Paso, on Monday evening, May 28th. This lecture under the title of "Does Public Health Work Pay?" is reproduced in full below, since it is one of the finest arguments for public health work which we have heard or seen in print.

"The Honorable Mr. Mayor, I trust Members of the Council, Members of the El Paso County Medical Society, Ladies and Gentlemen:

I am addressing a very considerable number of groups of people all over the country, of various sizes large and small. I remember once speaking within a week, many years ago, to two groups of people, two labor unions; both speeches, (or there was only one speech twice given), on the subject of tuberculosis. The one, Waiters and Paper Hangers Association, crowded the hall with a large audience, there was enormous enthusiasm, but if any good ever came from that meeting I have never heard of it. I have never heard from that speech or that meeting since that night, and that was approximately twenty years ago. The other meeting was that of the members of the Brass Polisher's Association. I sat in a saloon (and there are those in the audience who can remember when there were saloons), below the meeting hall and finally was called up to meet the presiding officer who sat at a desk in his shirt sleeves. There were not many people there when I came in

(Delivered under auspices El Paso County Medical Society, at Scottish Rite Cathedral, El Paso, Texas, May 28, 1923.)

and he did not leave his seat at the table. By way of introduction he said 'Fellers! here's a man that wants to talk to youse.' I went away from that meeting very much disturbed and perhaps downcast. About three years later, as Health Commissioner of the City of Chicago, there called at my office one night representatives of the unions who had the largest death rate from tuberculosis, and in our conference three of the unions, through their representatives, spoke rather warmly against any measures. Finally it came time for the representatives of the fourth union to speak, and that was the Brass Polisher's Union, though I did not recognize them. They turned the tide that evening when they said 'we heard this fellow make a speech three or four years ago. We decided to follow it up and investigate. There were some of our people who had tuberculosis and we sent them to the Southwest to sanatoriums to see what could be done for them out there and we want to say to other representatives of labor who are here tonight, that we are for this program—we are for this program by reason of what we have learned, or desired to learn from having been stimulated by a talk some three or four years ago made by Dr. Evans.' The results therefore, from a meeting, are not from the number of people who are there, but from the activity that is stirred in those who are present; the amount of action, if you please, that comes out from what is said, the amount of energy, or activity, or interest that is excited and continues to work, as does yeast, after the immediate action that gave it birth has passed. So my only quarrel with this audience is that many are sitting away back in the hall, as if they were afraid they might be going to catch something from the speaker. I hope it does not mean that you are here on sufferance, perhaps, and that is why you are not down here on the main corners where I can see your bald heads. (Many persons same down front.)

I came down into this country with no intention of making a speech, for the purpose of rest and recreation. I leave tomorrow for the rest of my recreation and simply make this address at the request of the members of the El Paso County Medical Society. This is a meeting of the El Paso County Medical Society, a meeting which is held out in front of the people, held for the purpose of placing before the people of El Paso, the work of their Health Department. You have just heard the recital Major Tarbett has given of the activities of your Department of Health, not only of the activities, but the results of these activities. He has just told you that the policy inaugurated less than three years ago is already bearing fruit that can be measured, is already producing results that can be determined, that can be understood. He has given you proofs of the fact that you are already on the right line, proofs in figures and statements of facts that you can take home and pass on to your neighbors.

I take it that the principal reason for this meeting tonight is that such information as to what is being done and the good that is coming from it shall be understood by the people to the end that they may uphold your Mayor and your City Council in the continuance of that which has been done and demonstrated to be the proper thing to do. I am going to talk on the subject, "Does Public Health Work Pay?" I am talking for the purpose of showing you that that which has been accomplished within the last three years in El Paso will continue in the future to accomplish, as it has in the past, because of the fact that it is properly founded on the right line, proven by the experience of other people in other places and other communities, as proven by our record of from 25 to 50 years—a record going back as far as the lifetime of your city, and therefore it is not merely accident or chance, or something that was of today and tomorrow will be not, a story that has been told by Major Tarbett, but is something that will continue with the years, and that of which you are justly proud tonight, you will be prouder still as the years go on. This has been the experience of other places for many years.

I am going to speak largely of Chicago tonight and trust you will not get the idea from that, that I am boosting Chicago, because Chicogoans do not do that. I trust you will not get the idea that anything I say is peculiar to Chicago, because it is not—I merely use it as an illustration because what I shall tell you I know to be a fact. There is no statement I shall make tonight that I do not know personally to be a relatively accurate statement and I have studied charts and diagrams to prove the truth of it—not that I have them here tonight, because I came down here for rest and pleasure—but I have them and I can guarantee the truth of every statement I make, and that is the only reason I am going to recite Chicago history, because if I recited the history of other places, I might make statements you could charge were false.

My argument is this: Public Health work pays. That no other kind of municipal, city or government work pays so well, (I trust you will listen, Mr. Mayor), and that a dollar expended in the Health Department returns more than a dollar spent in any other department of municipal, city or national government; that support, sympathy and backing given to health work pays better than support, sympathy and backing given to any other department. These are my first two points. My third is that there are logical reasons for the truth of the statements that I make and that the principles if applied to the work of other departments of government, though not now applied, would return far more than is given as the return from the work in those directions now, and fourth and lastly, the application of these thoughts and suggestions to your local community, to El Paso. You noticed what Major Tarbett said about death rates and probably observed the unsympathetic fashion we have of alluding to such statistics, just as if we think of it merely as a yardstick by which the results are measured, the measure by which condi-

tions are determined. We use this yardstick and we speak of these figures because we are enabled in this way to speak with accuracy and with definiteness, we can speak conclusively—there might be a dozen other directions in which we might talk and you could not pin us down, you could not prove we were right or wrong—so we voluntarily select that field for our statement of accomplishments in which any one with a pencil can check the truth or lack of truth.

Now here are briefly a few figures as to the death rates in the City of Chicago. Within the memory of those living, that death rate has fallen from 76 to 11, running rather uniformly now along 11; 76 was unduly high, but well over 40, between 40 and 50, constituted the average in the decade beginning with 1850. Now it is 11. Note the reduction from 76 as the maximum to 11, or in other words the death rate is now less than one-quarter what it was some 60 or 70 years ago; in other words it has been reduced three-quarters. Another illustration along the same general line—as late as 1873, which was the birth year of El Paso, our hot weather mortality, our summer mortality, was over 40; now it is 10. Within the span of years of the constitutional life of your city, our summer mortality rate has fallen from 40 to 10—one-fourth of what it was. Most of the activities of the Department of Health are exerted against those conditions which are responsible for hot weather mortality. In consequence, this matter of hot weather mortality furnishes a very good criterion by which you can judge whether our health work has been a success or not. Clean-up campaigns, fly campaigns, mosquito campaigns—all kinds of campaigns that return results that are most appreciable in hot weather are carried on. There are campaigns against conditions which are responsible for high hot weather mortality, hence note the reduction from 40 to 10 within a 50 year period. So much for the general death rate. Now let us take a few diseases—for instance—typhoid fever. I remember years or months just preceding the great World's Fair, when we were considerably agitated in Chicago about typhoid fever. We had spent a good many millions of dollars in building an attraction there which was intended to draw people from all parts of the world. Just prior to the opening of that exposition there went out stories which were based on fact that typhoid fever was existing in Chicago, to a degree which even in spite of the summertime and hot weather, made it a hazard. Our typhoid death rate that year was 175. I am not speaking technically here tonight, therefore I ask you not to disregard just what we mean by 175. What we mean is 175 per 100,000 population. So in 1893, 30 years ago, the typhoid death rate was 175. Now it is 1, and it has been 1 for five years—just one one-hundred seventy-fifth of what it was 30 years ago. We spent a great deal of money to get rid of typhoid fever in Chicago. Did it pay? While Dr. Rogers sitting here was an interne in the old Cook County Hospital, you could see many cases of typhoid fever there. Now we do not have enough typoid fever for the medical schools to study.

In regard to tuberculosis: about 25 years ago, our consumption rate was 185. We spent about ten years in interesting and educating the people—that was about all we did—ten years of educational campaign; not only educational in the sense that we were distributing tracts, but educational in the sense that we were persuading people to change their mode of living, and were conducting protective campaigns, and as the result of that line of activity, the tuberculosis death rate fell to 170. We have gone so far that we know just about how much can be accomplished by a type of activity and we noticed that that activity reduced the death rate from 185 to 170. Then we took on other lines of activity—it was made a reportable disease and other steps were taken, with the result that from 1907 to 1922, fifteen years, there has been a drop in the death rate from 170 to 68. Now it is still worth while, and it was pretty well spent money, was it not, decreasing the death rate from 185 to 170 in ten years and from 170 to 68 in about 15 years—so much for tuberculosis.

In 1908, we passed a milk ordinance, covering pasteurization and every promise which was made at that time has been fulfilled with not a single exception. A year previously, Professor Lorenz had come from Vienna to New York City, at which time he had an orthopedic clinic in New York and some seven thousand crippled children were registered at that clinic. Lorenz, who is a man of broad experience, over 70 years of age, examined some thousand or more children and then said to Dr. Copeland, Health Commissioner (now Senator Copeland), 'where are the bone cases—I do not see any'—and the investigators found they practically had none. New York City had passed a pasteurization ordinance in 1912, and they found that the only cases of bone tuberculosis in those clinics were in persons whose ages indicated that they had become infected with bone tuberculosis prior to the ordinance. In other words that ordinance has practically wiped out bone tuberculosis in New York City. Also in Chicago, as they do not have bone tuberculosis cases in the Cook County Hospital now as they used to, and if Dr. Brown and Dr. Rogers were to go back to that institution, they would not find much bone tuberculosis, for where those cases crowded the wards twenty years ago, today there are none. Does this show that health work has failed? And so we may go on down the line and take another line of thought.

In bygone years there were diseases so virulent at times, so dangerous as to constitute community menace, and it has looked frequently as if communities would be wiped out by myriads of those diseases. They have become more numerous now, but the terror has been eliminated. We are rather in danger now because of the fact that there is not a healthy fear of these diseases. We have become careless because of our forgetfulness of things as they were and have opened the door

to some of these diseases again. History tells us that in the early days of Chicago, marauders would wipe out families and travelers and the vast empire of the middle west was being held back and not being developed because of the raids of these marauders. The government sent out a body of troops. They got as far as Chicago and there they ran into cholera and the cholera wiped them out. Another expedition came west for the same purpose and entered Chicago. They also ran into disease—smallpox this time—and they never got out of Chicago. You folks here are close enough to Mexico to know that that which protected Mexico against invasion from Europe at times when other parts of America were being overrun by Spaniards, French, English and others—that the army which protected Mexico against invasion from Europe was not the Mexican army, but was the army of mosquitoes loaded with yellow fever and malaria, and shipload after shipload of armies have disembarked at Tampico and Vera Cruz, and then have been wiped out and a few stragglers have found their way back to the ships again and back to Europe conquered, not by the Mexicans, but by mosquitoes loaded with malaria and yellow fever. A great bulwark for Mexico these centuries has been the mosquitoes, and yet yellow fever has been wiped out in our section, and also malaria, and our section of the country was once a hot-bed of malaria. In 1836, one writer said that the natural home of malaria was the foot of Lake Michigan, yet scarcely an inhabitant of that part of the country remembers today that there is such a disease as malaria—remembers it as the result of per sonal experience. The Chicago Health Department will not accept a certificate of death from malaria, because they know there is no such thing. I remember a few years ago when a ship sailed to New York harbor with scores of cases of cholera on board and a few cases got up into New York City. It did not disturb the people, it did not spread beyond those few cases, and yet this was cholera, which but a few years ago threatened to wipe out our great centers of life. I told you a few moments ago that one of the menaces to the success of the great World's Fair in Chicago, in 1893, was smallpox, yet thanks to the efficiency of vaccination in our great city, no one fears smallpox, no one dreads smallpox. We have become satisfied with our condition, we are disposed again to open the doors because in our security, we have forgotten our old fear, we have forgotten the dread of our old days. Sure! and that is true of this community as it is of other communities. I do not think I need say more to make my first point a proven point, a point that cannot be denied—that health work pays.

Another line, please. About the time this city was founded, the average span of human life in the United States as judged by the only method we have of measuring the average length of human life, the average then of life was 33 years, now it is 55 years. The average covered by this standard of span of life is nearly double what it was when El Paso was founded. It costs a good deal of money to raise a child up to 15 or 20 years of age, and what is the use of spending all that money to raise them if they are going to die when they are 33? They have not long enough to live to make on investment. Now they live up to 55—that shows they are earning on the investment. You have spent a good deal of money in raising the child, in educating the child, in rearing the child, and where do you gain anything if he dies in ten years—where does the community gain anything, since community welfare is founded on the earning capacity of the people who make up the community. I said awhile ago our mortality rate is now 11. It would take our community 90 years for that community to die out and that means if nobody moved in and nobody moved out, if our population was stable and fixed, the average people would live to be 90 years of age—some living is it not? I think a good many folks if you proposed to them that they would live to be 90 years of age, would want you to take a stick and knock them in the head—yet this is what the figures show.

A few years ago, the first national health society celebrated its 50th anniversary. The meeting was held in honor of its first president, Dr. Stephen Smith, who was just entering his 100th year, and who, as first Commissioner of Health in New York City, had lived long enough to see all this beautiful panorama unfold, to which I have called your attention. It had been his privilege to stand upon a Mt. Fraklin and see the gain in the security of life, in the vigor of manhood. It had all come up in the lifetime of the man who died about one year ago, Stephen Smith. At this banquet, as he entered upon his 100th year, he proposed that we officially disregard the so-called biblical injunction to live for three score years and ten and aim at 100 years as the proper span of life. We did not blindly adopt the suggestion of the admirable old gentleman, but appointed a very scientific committee composed in the main of actuaries of life insurance companies to study the question and they came back with very closely thought out conclusions and said that within thirty years the average period of life should be 75 years. Do you know what that means? That means this, that while a great many people will continue to die young, a great many will continue to die in childhood, the average span of life will be 75 years, and a very large percent of the population will live to be 100 years of age. That is the prophecy for the very near future, based upon the assertion that health work such as you are doing here in El Paso and is being done in all parts of the country, will continue to be done. And so, does public health work pay? You say that this is just a change which is naturally coming about and it is not the result of anybody's or any community's governing action, but a natural evolution. If that is true, however, it should be uniform all over the country. Now is it uniform? By no means. I have told you of a community that has a

death rate of ten; you have heard of another with a death rate of 20. Some places will have a death rate five times as high as the others, and why the variation if this be but a natural evolution? You heard something from Major Tarbett about baby death rates. Sometime ago a man came from New Zealand and he told us of the wonderful results they were having there in caring for babies. He said that in New Zealand they had been able to bring the baby death rate down to 50. We set out to equal that rate and in a year four American cities have reported baby death rates as low as 30, and many as low as 50, the mark at which we had been shooting. In four American cities as low as thirty, yet there are some American cities with the rate as high as 300. Now is that uniform? Is that the result of a natural evolution? No, it has come about as the result of intelligence, leadership intelligence and followship intelligence, and it is coming about in El Paso. If you have the same intelligent leadership, coupled with the same intelligent followship, you cannot fail. So you can see that health work pays, that it pays better than does work done by any other agency of the government. I make this statement with all due respect to what is being done by other agencies of the government. I make the statement that here is a record that is incomparably better than the police department can show, than the fire department can show, than the judicial department can show, than the department of records can show. There is no department of your city government or your state government, or your national goverment that can show a record that is in any degree comparable with the record your health department can show. Take your police department, and as I told you I am going to stick to Chicago figures. I have shown you how the death rate has been reduced in fifty years until now it is not one-fourth of what it was fifty years ago and deaths from certain diseases have been lowered more than one-fourth, more than three-fourths of what they were fifty years ago. Now let us take the police department. Is crime more prevalent now than it was fifty years ago? Is peace and security four times as great as it was fifty years ago? I do not think that anybody will claim that there is less crime now than there was fifty years ago, or that there is four times as much security against murder and theft and other offences than there was fifty years ago. Take the fire department. We have very well conducted fire departments as a rule, very admirable fire departments of which we are proud and justly proud. We honor the men who work in our fire departments, but how about the fire hazard? Has that been reduced 75 per cent in the last fifty years? Is it only one-quarter now of what it was fifty years ago? Take the department of justice. How about our courts? Are they only one-quarter as busy as they were fifty years ago? Take the criminal courts for instance, is the restraint of criminal through the courts as successful in a degree comparable with the record of health work? There is no one who could make this claim, so I say there is no division of the government anywhere that can make the record the health department has made for the past fifty years, and that statement will not be challenged anywhere. Now why is that? The reason is this. Every other department of government is dealing with end products. There is no other branch that deals with the mass, with the whole and goes to the root of things. The department started out by taking care of us, taking care of the man who as the result of ignorance on his part, or carelessness on his part had earned a disease. The government said we will provide hospitals to care for him; we will provide nurses to care for him; we will provide doctors to care for him. But the department goes further than that. It goes up yonder where the spring starts, it goes back from the stream that flows down the valley and proposes to take care of the purity of the water. If the bacteriologist knows something that is necessary for the solution of the problem, his services are commandeered, and also the sanitary engineer. You heard the story tonight told us by an engineer, who could also have told you of the work that is being done by the engineers away out in the jungles and how these men go right back to the beginning of things in the work of the health department. The work of prevention of diseases is work that is not wasted, it is the work that has enabled us to achieve the results that have been set forth tonight, because of the fact that dimes have been spent at the source rather than dollars with the end product. Your fire departments are just beginning to learn the story, you are just beginning to have fireproof material and other kinds of fire preventive work. The trouble with the fire department is that it is today where the health departments were fifty years ago. No police department, no department of justice has commandeered the services of psychologists, criminologists, and those men dealing with the study of crime, for the study of crime prevention, as men have been commandeered for the study of disease prevention. That is the fallacy of the situation and that is the reason I say this record is a record that is incomparable and cannot be challenged. My suggestion to remedy this situation is that other departments of the government go to school with the health department and learn lessons from the book of experience of the health department, for if they do they can tell a story some quarter of a century from now that will be as pregnant with achievements, as glorious in fulfillment, as the story which the health departments can tell.

Now, Mr. Mayor, and citizens of El Paso, that which you are undertaking, a fulltime health department, directed by men whose thought, whose planning, whose scheming, whose organization ability is being directed against prevention of disease and the producing of better living conditions, a health department that is protected from political influence of every kind, where there is the same security for the worker in the ranks

and the worker at the head that there is in the educational departments, will surely produce and achieve results for El Paso in the years to come as it has achieved results in the years that you have had it. The reasons are because it is right—I am sure you can see it is right and is in accord with the plain teaching of accomplishment for the last quarter or half century—a history that has proved that what is logical is actual logic and not false reasoning.

Now about El Paso—all that is true of other places is true of El Paso and I can see no reason why it is not doubly true of El Paso. I am not going to talk to you on the technic of your problem—in the first place I do not know your problem, but I would say to you what might be regarded as my judgment as to the method of absorbing your problem, and insofar as it would be a judgment or opinion as to the best method of solving some particular problem of yours, it might be entitled to much weight. When it comes to working out the best way of doing this, I would say the thing for you to do would be to make out a list of the experienced men in your community, consult them and adapt the experience of others to your own needs. Here are some rather jumbled reasons I want to have something to say about as regards El Paso.

I talked to a man today, who may or may not be in the audience tonight, who heard me talk on the subject of tuberculosis in your community, I think, eight years ago, perhaps to a larger audience than there is tonight. It may be that I am less of an attraction now than then. He told me that eight years ago he was very much interested in the subject of tuberculosis because he was a lunger, and a fresh one from Louisiana, looking for light, and he came to that talk for the purpose of learning something as to how to do his job, his job being to get himself well of consumption. I do not remember now whether some eight years ago I talked to individuals on the problems of those individuals or whether I taked to the community at large on the question of its problems—the talk of one sort is in no ways a talk of the other sort. Nevertheless, he was there, whatever his reason for coming might have been, but it was no lunger who spoke to me today on the street, but a strong, vigorous, healthy man. I talked to another man also today, a very prominent citizen of your community, who came here some thirty or maybe forty years ago a lunger, who had gotten well and who had acquired something else, and that was he had acquired an appetite for El Paso. He had found two things here—first, a cure for his disease, and, second, a liking for your community and the opportunities that it offers, and I am reliably informed that he has availed himself of those opportunities and constitutes one of your very substantial men. He told me that more than half of your people, your American people, perhaps two-thirds of the families who make up the life of El Paso, had come here because some member of the family was a lunger, had been cured here and had remained here, and this in great measure to the fact that they were drawn here by the sunlight and the air—the nature cure of consumption that God has given. That these folks had contributed all their dollars and energy to the upbuilding of this community, not only El Paso, but the valley and all the country round about. They constitute your resources, they are your strength, they are the power of your community. It strikes me that a community where more than one-half its membership had been drawn because of the opportunities for health should be a leader in the work of health conservation, the community that had received the blessings God has poured out on them should make use of those blessings for the benefit not only of its citizens, but the benefit of mankind. The great lodestone that draws people to El Paso from Maine, from Mississippi and from all parts of the country, the great lodestone that draws them here is health. It would not be without precedent for your community to make use of the advantages which it has, making use of that which God has so lavishly given. People have done that in days past in other communities. One of the best of Tolstoy's stories is the story of a doctor, a health officer in a resort town, a resort town that was pulling people from all parts of the world, the cripple, the lame and the halt, all were coming there to be relieved of their disorders. They came in droves and it seemed as if it would be beyond the capacity to supply the waters and the benefits of the waters to all. Not only came the cripple, the lame and the halt, but also sufferers from dread contagious diseases, all of whom wanted to plunge in the waters. The young health officer realized the danger and waved them back; the precious lodestone of health had to be protected. These men by reason of neglect were spreading disease and the story of Tolstoy is that of the man who stood alone in the wilderness, crying out the dangers to the people, and how the people and those who had formerly been his best friends, now looked upon him as the enemy of the people, because he cried out the dangers, and urged against the pollution of the curative waters.

Why, I can remember when people were afraid to drink your water right here in El Paso, because they were afraid it was polluted and to drink it meant possibly typhoid fever. People first feared to come here because there was more or less danger of typhoid and more or less danger of smallpox and typhus fever than in other places. I have been coming here practically seventeen years and I can easily see the change which has taken place during that period of time. Now you are selling health. If you were to sell drugs or groceries or anything else, you would see to it that the articles live up to the label not only on the front side but on the back as well. Since you are selling health, your policy is a hazardous policy unless you make effective every procedure for the pro-

tection of health that has been established and acecpted as a proven procedure in any part of the country. You are in the limelight in El Paso, you have a reputation for health, you are known for health, you have advertised resources for health which redound to your advantage, but if you have an epidemic and the story of that epidemic travels out over the same lines of communication that expresses your good health, think what an effect this would have. I submit this as an argument that the community which sells health must guarantee the product, must guarantee that which they have for sale. It is not given to any of us to say or to see what is around the corner—no man can vision what the future holds with any degree of certainty, no man can see very far into the future, and perhaps it is best and wise that this is so.

I want to call your attention to a few lines of opportunity in this direction, lines that are full of potentialities, full of possibilities for you, far more so than for the average run of communities. We are just beginning to understand the curative power of the sunlight. We do not know very much about it up to date. We have much to learn in this regard, but we are discovering that the sunlight is a great bottle of portable medicine, as it were, a kind of patent medicine, if you please, with all sorts of ingredients, some good for one disease and some good for another disease, some harmful here and some harmful younder. Part of the sun's rays is a sort of specific for some thing, another part for something else—in reality a combination of many parts and we are just beginning to understand something of the essential side of sunlight and especially something of the curative power of sunlight. We are learning that there are forces in the sun's rays that are more surpassing in power than any medicines which have ever been bottled by man. We are just beginning, we have scarcely begun to know, how to use these rays. A quarter of a century from now perhaps we will be using the sun's rays as essentially as x-rays, or as essentially as some other things are being used today which were not known a quarter of a century ago. When that time comes you have the real article in El Paso in wholesale quantities. There would not be much use in Chicago in talking about it, or in Pittsburgh, because when it comes to sunlight there it is beyond reach—like reaching for persimmons 40 fet high, with a pole on ly 20 feet long. Here you have an excess of sunlight all the time and when the time comes that scientific use can be made of sunlight, you will have the article in an unsurpassing degree. I cannot tell you what the future holds, but I can say that when it comes to sunlight and the day comes when scientific use can be made of it, you will have a bag of tricks.

Just another idea, if you please, and I hope someone is here from the Chamber of Commerce. You cannot make El Paso very much of a resort for well people in the summer time. It is too far south. There is too much sunlight and there is too much heat. You cannot bring people here from Chicago and New York, from California and Maine, in the summer as a health resort for healthy people. Now let me say to you that there is a very limited field for a health resort for sick people, as they constitute a very small part of the people, a very small minority of the people. However well people are, however, they are going to go to health resorts for the purpose of keeping well, and so I think a promising field of health department work will be to increase bodily vigor, not only in promoting mental health and mental happiness, but in getting joy out of life and increasing the vigor and the capacity with which well men can and will work—that is the great future in health department work. The time will come when the great health resorts will not be resorts for the sick, but will be resorts to which vigorous men and women can come in order to renew their vigor and gain new strength with which to combat the problems of life. You understand how necessary that will be when they get to be 100 years old. As yet people do not appreciate the necessity of going to a health resort to keep well, as they will do in the future.

You have great possibilities for making this a great winter playground that will be attractive to people from all over America, and especially attractive to people on the plains and in the valleys hereabout. A few yers ago I was in western Canada and while there the Canadian Pacific Railroad was building a great playground for winter sports. Their idea was not that they would attract many from Montreal, from Quebec, or Toronto, but they would draw to that place in the winter the people who lived out on the farms and ranches, draw them to this wonderfully attractive playground of narure's winter sports. This matter of winter sports has grown to be a great field of activity these days, and just as it was initiated, encouraged and stimulated in the Alps, so it will be in this country. We are beginning already to hear of the development of winter sports in all parts of the United States. A week ago I was up in Cloudcroft, this weekend up in the mountains around Elephant Butte dam. I understand those mountains are snow clad in winter. There is a great opportunity there for the development of winter sports in close proximity to El Paso—winter sports that would be so attractive that your section, particularly the mountains of your vicinity, would be drawing crowds from all over the United States—draw them to winter sports for the purpose of keeping well. Some of you have seen those trains which go from coast to coast in sections, four, six, eight, ten sections to a single train, carrying people who are seeking the soft climate of California for the winter, and other trains from the north filled with those going there for the same purpose. And yet relatively a small field it must be that appeals to the sick, to the old, the worn and decrepit, and what a great field there will be

for winter sports where hard-working men and women in the full vigor of life will leave their tasks for a short vacation and will go into the ice fields, the snow and the mountains, not for the purpose of escaping pneumonia or disease, but to renew their vigor, their strength and their energy and initiative for the commercial and professional duties of the ensuing years. When that time comes —and it is going to come—when there will be the development of winter sports in all parts of the country, I know of no section which would make a stronger appeal to the people all over the country to spend their winter vacations than in this particular section.

Now, I have talked long enough. I have just one other thought, and that is this. Those of you who have been to Elephant Buttte Dam and have been through the galleries have seen there a lot of pipes in which water is trickling. These are scattered at length through that gallery and are put there for the purpose of showing the amount of leak from the dam in its various parts, to the end that should any section leak to a hazardous degree they might have early knowledge of the fact in order to safeguard against it. A flood down the valley is an awful thing. Some of you have experienced it. I have been told that in this very community, a short distance to the north of you, at the place I went yesterday, perhaps less than three years ago, rain caused a torrent to come dashing down the mountainside and wiped out the community. Perhaps the most dramatic disaster the United States has ever known was the Johnstown flood, where the dam suddenly gave way and a great mountain of water came rolling down the valley, men, women and children fleeing from its path, their houses and the accumulations of years wiped out in a moment without warning and hundreds of lives lost. You are sleeping safely tonight and are more secure here in El Paso because of the fact that up yonder at Elephant Butte they built a dam, which was built not only as strong as men knew how to build a dam, not only that, but because in the interior they have spent a lot of money to build a gallery, in which are gathered pipes that show the leakage in the various parts of the dam. You are sleeping securely in El Paso tonight because you know there is no possibility of that dam's giving way and a mountain of water flowing down and wiping out the valley and destroying the lives of your people. Those who built the dam might have said, we will disregard the danger of a break, there is no chance that the dam will give way—but they did not do this. They said, if there is any danger we want to know it; we want to know it at once in order that before it gets out of hand we may remove that danger, and that is the philosophy that you rest upon, happy and contented and secure here in El Paso tonight. And that is just the philosophy of health department work. Those dangerous diseases are just as real today as they were fifty years ago, just as menacing now as then, just as much of a menace as the Johnstown Dam, or as the flood of waters held back by the Elephant Butte Dam, but you can rest secure in El Paso because you know your dam is galleried and that there are men on guard in the gallery you call your health department, charged with the responsibility of detecting leaks at every source, of appreciating danger at the time of its inception and cutting it off at its very start, at the time when there is a beginning of waste in the expenditure of your money. You are secure in your community and you will continue to be secure because of the fact that you have chosen to establish a health department properly organized, properly officered, and one that constitutes a bulwark for the protection of your community, just as much as those galleries are the protection of that dam up there and indirectly to you down here.

Now, it is good politics to keep the health department out of politics. I served for four years as Health Commissioner of the city of Chicago and had perhaps as stormy a time as anybody ever had in a political office. I am quite certain that my mayor regarded me as a political liability. We had some pretty bitter fights with the council. (We are not as fortunate as you are in having a small and intelligent council.) We had a council of 75, the majority of them intelligent men—(because they voted for the health department)—a very considerable minority of unintelligent men—(who did not vote for the health department). Within four years we had many memorable fights, attracting the attention of the American people from coast to coast. Within four years, every single alderman (I make no exception and I challenge contradiction in this statement as in any other), every single alderman who fought health measures was eliminated politically and not one has ever been heard of since. As I think back over the administrations in the city of Chicago with which I have enjoyed acquaintance and have had knowledge, running back almost 40 years, I can remember a good many things regarding the reputation of various administrations and city departments, and this I remember and have heard it commented upon frequently, that the outstanding men in city administrations, as the years go on, other than the mayor, are remembered after the expiration of the administration, are the health commissioners, the health officers who have fought for the people, and although temporarily they may seem to be, and doubtless for the moment are, political liabilities, yet in the long run they constitute the best political assets that community has had, and I think this statement can be made with equal truth of a number of other communities of which I have knowledge.

Now, this constitutes what I have to say this evening. I have spoken as a member of the El Paso County Medical Society. I have spoken at their sufferance and I trust they are willing to say that I have spoken their message to you and through you to the people of El Paso and vicinity. I recognize the

fact that in the younger days of health work it is necessary that men who make up the membership of the medical profession should assume the leadership, that they should carry the burden of the fight for the prevention of disease, but the time will come when you will recognize that it is not their fight, that it is really your fight, that it is your health that is being protected, your home for which planning is being done, and that the work which is being proposed runs intimately into your lives, indeed with your relations with your fellow men. It runs into your homes, your lives, your intimate affairs very much more than does any other branch of government. You can afford to occupy an attitude of aloofness to your police department, your fire department, your legal department, your department of records, because you have very little to do with them directly and intimately. They have very little work to do with the average of you intimately and directly—but not so with your health department. It comes right into your lives, it sits at your firesides, it constitutes an integral part of your individual life, of your family life, your community life, and you cannot afford to stand apart, you cannot afford to say that it is something with which you have nothing to do, and something with which you have no concern. It touches your life in its innermost recesses. Therefore, the day will come before long when the leadership will pass from the El Paso County Medical Society and from the medical profession to the people themselves and you in time will come to understand that your health department is your source of strength, your Gibraltar, and that it should have your earnest support, and as you give it such support, it will return protection for your families and your homes.

THE PITUITARY GLAND

(A Synopsis of Dr. C. A. Wright's Address to the El Paso County Medical Society May 14, 1923, at a Special Meeting.)

The pituitary gland controls the body growth, sex development and function, body obesity, and many other characteristics. Symptomatology, large and varied, may occur when the function of this gland is disturbed. These conditions present a most interesting field of study, and one of the most important and far-reaching of the branches of medicine—Endocrinology. The increasing appreciation of the importance of this study and more careful observations are revealing more and more of these disturbances in the usual day's work among patients, and many conditions heretofore inexplainable have had new light thrown upon them.

The pituitary gland of man weighs about 7½ grains normally. Anatomically it is made up of three lobes, anterior, posterior and middle or intermediate. For practical purposes, however, it is divided into anterior or glandular, and posterior or nervous, lobes. The secretion of the former goes into the blood stream and that of the latter is thought to be transmitted into the cerebrospinal fluid; this, however, has not been entirely determined. The research of such workers as Cushing, Homans, Goetsch, Bell and others has been of great value in the advance of our information of the physiology of the hypophyseal lobes.

It has been practically determined that the anterior lobe controls the skeletal and subcuticular growth, muscle growth and tone, the development and function of the sexual organs and the appearance of the secondary sex characters. The posterior lobe has definite control over the fat and sugar metabolism, functioning of smooth muscles, body temperature, blood pressure and pulse. There may occur an under activity or an over activity of either the anterior or posterior lobes or any combination of these. The symptoms resulting will bear a direct relation to the degree of activity of the different lobes, and whether or not the disturbance is preadolescent or postadolescent. The body proportions, the type of head and hand, length relativity of the long bone growth with the torso, and the distribution of fat and body hair are items of great importance in the study of cases of disturbed function of this gland.

There were presented slides of seventeen recent cases to illustrate the points emphasized in this very interesting paper.

In conclusion, Dr. Wright stated that there are many symptoms which occur frequently with most of these patients, not previously mentioned,

such as asthma, indefinite pains in the arms, legs and abdomen, feeling of shortness of breath, constipation, smooth, dry skin, tendency to bruising easily of the flesh, and low blood pressure.

The effect of substitution treatment is these cases is yet still uncertain. Some patients respond readily and the results are good, while others derive but little benefit. Dr. Wright thinks that it is entirely probable, in a number of cases of failure, that the dosage has not been large enough or used at sufficiently frequent intervals. He states that undoubtedly the pituitary products have more efficiency when administered hypodermically, than by mouth. The two methods in combination give satisfactory results.

CASE REPORTS.

DR. R. FERGUSON, Bisbee, Arizona.

Primary Carcinoma of Both Lungs

PATIENT: C. J., Male. Age 44 years.

PREVIOUS HISTORY: His illness began, according to his opinion, twelve years ago with a cough, asthma and loss of weight. Before that illness he weighed nearly two hundred pounds.

PRESENT ILLNESS: Patient had worked until about February 18th, 1923, at that time he had to stop work and go to bed. He complained of pain in the region of the right kidney, had considerable temperature and very rapid pulse. He was very thin, probably weighing about one hundred and twenty-five pounds, and coughed a great deal. Examination of urine showed considerable pus. No tubercle bacilli were found in the sputum on several examinations. He became worse and was sent to the hospital March 10th, 1923. Had to sit up in bed most of the time, had a great deal of pleuritic pain, coughed and expectorated very much blood-tinged sputum. His pulse varied from 100 to 136 and temperature about 100 most of the time. He gradually grew weaker and died March 28th, 1923. He had a negative Wassermann reaction. X-ray of lungs showed typical tumor shadows in both lungs.

Autopsy revealed no tumor in liver, stomach, kidneys, pancreas, prostate, intestines or in the mediastinum. There were strong pleuritic adhesions on both sides of the chest and the whole of both lungs except the lower lobes were the seat of tumors, part of which showed necrosis and cavities. Report from the Pathological Laboratory at Phoenix stated that this tumor had the characteristic appearance of carcinoma.

The chief, unusual feature in this case consisted in having a primary carcinoma in both lungs.

Paget's Disease With Report of Case

Paget's Disease is a rare, malignant disease usually of the nipple and areola, beginning as an eczematoid infection and terminating in cancerous involvement of the whole gland. The earliest stage is a keratosis of the epidermic layer of the skin. The cells of the epidermis increase in numbers and the epidermis is thickened and raised in crusts. The true skin is much infiltrated with small, round cells and there is an increased vascularity of the infected part. At the beginning the epithelial growth invades the sebaceous and sweat glands and the ducts of the mammary glands. Eventually the walls of the ducts give way and the growth invades the stroma of the glands.

The disease was first described by Paget in 1874 and is most frequent in women from forty to sixty years of age. The cases in men are reported, but seem to be very rare. The disease is slow and insidious in most cases the eczematoid area only extends a few inches beyond the aroela; in some instances, however, it is much more extensive. As a rule, in two or three years we find malignant involvement of the breast.

CASE REPORT

PATIENT: F. V. M. Mexican. Male. Age 24 years.

COMPLAINT: Ulceration and eruption on left breast.

FAMILY HISTORY: Negative for cancer.

PREVIOUS HISTORY: Negative.

PRESENT HISTORY: Began four years ago with a small pimple on the left breast which became infected and was opened. The growth continued to spread toward the left axilla and sternum. When first seen by us, there was a large area of infiltration and ulceration over the left breast and small pustules and papules for several inches beyond this. Wassermann reaction was negative. The growth was entirely removed along with a small amount of the pectoralis major muscle and the axilary glands and fat was cleaned out. The skin had to be undermined for a considerable extent above and below to approximate the edges. The wound is healing well.

Report from the Pathological Laboratory at Phoenix showed a squamous cell carcinoma with a typical proliferation of the surface epithelium and infiltration of the deeper structures in the form of irregular strands and alveoli. Sections of the lymph gland did not show carcinomatous involvement.

LEAD POISONING

They are having most satisfactory results in the treatment of both acute and chronic lead poisoning at the El Paso Smelter Hospital with the Clague Electrolytic System.

This method was perfected by Messrs. Clague and Oliver of England and has only recently been introduced into this country.

The patients are seated at a table with the hands immersed in a tub containing salt solution in which is placed the negative electrode. A similar tub for the feet containing the positive electrode. A voltage of sixteen is generally sufficient and a milliamperage of twenty to forty.

Treatments are given daily from thirty minutes to one hour, depending upon the severity of the case, and continued for thirty days; then at longer intervals.

In this method of treatment the electrical current passes through the body; it breaks up any lead compound which may be present, carrying the acid radicle to the positive pole, and the base to the negative.

The recovery is much shorter than by any other method, so far tried, and is much more satisfactory to the patients than the older methods of elimination by drugs.

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OUR SOUTH AMERICAN COLLEAGUES

(R. D. KENNEDY, M. D., F. A. C. S., Globe, Arizona.)

The recent trip of the American College of Surgeons to South America gave us an opportunity to see what our professional brothers are doing in the cities visited.

Our first stop was at Havana and here work was being done very much as it is in this country, due no doubt to its close proximity to the United States and the influence exerted by the brief American occupation. The hospitals are modern, well screened, and staffed by trained nurses, and the work we saw done was of a high order.

The same is true of Panama. The hospitals visited here are in the Canal Zone, staffed by Americans and with American trained nurses. The work seen was such as you would see in any of our large medical centers.

From Panama we went to Cartagena. Here the hospitals reflect the poverty of the country, being very poor in every respect. I saw no surgery done while here.

From Cartagena we went to Aguira and thence to Caracas. I saw no surgery done in Caracas. The hospitals are large, clean and well ventilated, but there were no screens and male attendants apparently did the nursing.

From here we went to Port of Spain, Trinidad. This being an English possession the hospitals are conducted along the lines of British hospitals and have trained nurses.

Our next stop was at Rio Janeiro, Brazil. This is a city of about a million and a half population, and probably the most beautiful city in the world. The hospitals are large, well ventilated, but not screened and they had no trained nurses. An attempt is being made now to organize a training school for nurses in Rio. The Oswaldo Cruz Institute is situated in the outskirts of Rio and is an exceedingly well equipped institution for the study of bacteriology and pathology, and I understand is to be made a part of the university. The surgeons as a whole I do not think are quite on a par with the surgeons of this country. In making this statement there is a possibility of error as these men received most of their post-graduate work in Europe and follow the European technic, which differs from ours in some respects, and being unfamiliar is liable to make us criticise it adversely. Occasionally we would see a surgeon whose work particularly impressed us and invariably we would find out that he had spent some time in this country in post-graduate work. Some few of the specialties are apparently as well handled as in this country.

Throughout the countries visited most of the surgeons we met were men of considerable means, had all studied abroad, spoke two or more languages and were highly polished.

In Buenos Aires the British hospital is mostly screened and has trained nurses. The other hospitals are much the same as in Brazil.

The number of operations on echinococcus cysts of the various parts of the body was the most striking thing

seen in the various hospitals in Argentina and Uruguay. It was no uncommon thing to see as high as five posted for operation in a single clinic. Spinal anesthesia is used much more generally than with us and of the many operations I saw performed under it there was not a single failure.

Everywhere we went we were received most cordially, and the medical profession as a whole seemed to invite criticism. This was due, perhaps, to the hope that it might stimulate the government to improve the hospitals as the public hospitals are supported and controlled by the various governments.

The public hospitals in Brazil, Argentina and Uruguay are all very much the same. They are supported by revenues derived from the sale of lottery tickets operated by the state and revenues derived from all other gambling devices. Being state owned and operated they are in the hands of politicians which accounts, no doubt, for some of their defects. They are, as a rule, old buildings built before the days of modern hospital architecture and lack many things that we consider essential. For instance practically none of them are screened except the British hospital in Buenos Aires, a new hospital just built in Montevideo and a few private hospitals.

An attempt is now being made to start training schools for nurses. They are having considerable difficulty in getting the right class of young women to take up the work, nursing being looked on as menial; it will not be till the people are educated to the point where nursing will be looked on as a profession as honorable as any of the other professions that the best class of women will be induced to take it up.

THE EL PASO HEALTH DEPARTMENT

In a report on the "Organization and Administartion of the City of El Paso" by a representative of the Institute for Public Service made in May, 1922, the attention of the city was called to the extremely high and needless death rate and recommendations made that the health department be reorganized and put on a full time basis. This recommendation was followed out by the city administration, and the Surgeon General of the U. S. Public Health Service at the request of the mayor assigned an officer to that service to reorganize the department and to direct the work during reorganization.

Two factors peculiar to El Paso are primarily the cause, but in no way can be considered as the excuse, for the excessively high death rate.

The first is the location directly on the Mexican border and its correspondingly large percentage, 50 per cent, of Mexican population, this population being made up of the foreign born or foreign parentage and largely of the peon class.

The second is due to the climatic conditions which make the city a center for tuberculars coming from all parts of the United States and in all stages of the disease.

That the gross death rate for El Paso will always be somewhat higher than that of other cities in the United States is undoubtedly true, but that this rate should not exceed the average of the other cities by more than three per thousand is also true. The fact that the gross death rate in 1921 was 25.2 per thousand living population indicated the need of active and efficient public health work.

The two factors entering into the high death rate are, deaths of children under two years of age, which constitute about 25 per cent of the total deaths, and tuberculosis, which also constitutes about 25 per cent of the total deaths.

While it is obvious that this high baby death rate is largely due to the character and extent of the Mexican population, it must not be overlooked that bad conditions in any part of the city tend to contaminate the remainder of the city, and this is shown very strikingly by the infant mortality rate (deaths of children under one year per 1,000 births) in 1921, when the rate was 168, practically twice the average of the registration area in the

United States. If all elements of the population where high infant death rates might be expected are removed, we find that the residual rate is 98, or nearly twice what would be expected of high class American population.

Two factors enter into the high infant death rate. First, is the large number of deaths occurring in the first few days of life, due to ignorance and improper care prior to and at the time of birth. Second is the death rate for children under two years of age from intestinal diseases. This second cause was responsible for a death rate of 379 per hundred thousand living population in 1921, which was a slight reduction over that of 1920, when the rate was 400.

This slaughter of the innocents indicated one line of activity which it

(Continued on page 270)

JOHN K. W. PIPER

The members of the Maricopa County Medical Society, of Phoenix, Ariz., will miss from their gatherings, the genial face and friendly comradeship of Dr. John K. W. Piper, of Russellville, Ky., who died in Phoenix the middle of June. Dr. Piper had spent two winters in Phoenix and had recently decided to make his home there, having just secured his certificate to practice in Arizona. He suffered from a lung abscess, resulting from influenza, but was apparently regaining his health and strength. He had made many friends, both among the citizens and the medical profession of Phoenix. He always attended the medical society meetings, and his unexpected death from hemorrhage brought grief to his many friends in that organization. His body was shipped to his home in Russellville, Ky., for burial.

DR. GEORGE T. FULLER

The secretary of the Cochise County Medical Society reports the death, on April 20th, 1923, of Dr. George T. Fuller, Jr., of Benson. Dr. Fuller was born in 1892, and graduated from the Eclectic Medical College, of Cincinnati, Ohio. He had practiced in Arizona since 1919, and had been located in Benson practically all of this time.

DR. JOHN McBRIDE

Dr. John McBride died at St. Joseph Sanatorium on May 19, 1923. Dr. McBride was a graduate of Dartmouth Medical College, class of 1901. He was licensed in New Hampshire January, 1916; in Texas in June, 1919, and in New Mexico in January, 1922, moving to the Sunshine state on account of the health of some member of his family.

Dr. McBride had practiced but a short time in Albuquerque and those who made his acquaintance came to know him as a quiet, unassuming, amiable type of man. While he had not yet been with us long enough to affiliate with the local medical society, his presence as a visitor at St. Joseph Hospital staff meetings always added somewhat to the pleasure of those in attendance.

Dr. McBride was a member of the Masonic order, the local lodge of Masons being in charge of the funeral services. Interment took place in Fairview Cemetery, Albuquerque.

Dr. McBride is survived by a widow and one son, who live near Albuquerque.

ARIZONA PERSONALS

YUMA COUNTY

(DR. LEON JACOBS, Secretary.)

DR. C. E. ROONEY, of Yuma, has left that city and located in Santa Monica, Calif.

THE YUMA HOSPITAL is being dismantled and rebuilt. In the future it will be known as the Yuma County Hospital, as the county authorities have taken over the management of the institution. The new hospital will be situated at a beautiful spot, where it is much cooler than the present location. It will be more up-to-date, as the county authorities have planned to make many improvements. The physicians of Yuma anticipate, with great pleasure, the work in a thoroughly modern institution.

DR. GEORGE A. BRIDGE, chief surgeon of the Copper Queen Medical Staff, at Bisbee, is attending clinics in New York City for a month or two.

ARIZONA STATE MEDICAL ASSOCIATION

REPORT OF THIRTY-SECOND ANNUAL MEETING, GRAND CANYON, ARIZONA, JUNE 21-22, 1923.

(By DR. HARRY L. GOSS, Phoenix, Acting Secretary.)

(Excerpts of papers furnished by Dr. Fred Holmes, of Phoenix.)

The 1923 meeting of the Association was remarkable for two things—the excellence of the papers presented and the small number of the members present. It would seem that the wonderful scenery of the Grand Canyon, together with the international renown of the speakers on the program would have been attractions hard to resist on the part of the doctors of Arizona. But, including the speakers on the program, there were twenty-nine names on the register. Drs. Albee and Hunt of New York did not appear, owing to conflicting engagements.

Thursday A. M., June 21.

No meeting of the Council was held owing to the fact that not one of the councillors was present. President Harry T. Southworth of Prescott presided and Dr. H. L. Goss of Phoenix acted as secretary in the absence of Dr. Harbridge.

The first paper on the program was that of Dr. John A. Kolmer of Philadelphia, "The Nature of Immunity in Syphilis, with Special Reference to the Specificity and Practical Value of a New Complement Fixation Test, Based upon Results of Studies in the Standardization of Technic." Summary:

Dermatrophic and neurotrophic strains of spirochetae pallida. Dermatrophic invade the skin very markedly with little tendency to invade the central nervous system; the neurotrophic are just the reverse. Very likely there is a small round form of spirochete as well as the spiral; so that it may be that they are transmitted by the spermatozoa. Such an organism could infect without an abrasion. Two or three weeks is required for the development of a chancre, but the spirochetes have already invaded the lymhpatic system; such invasion occurs as early as forty-eight hours in the rabbit. Physicians should diagnose the disease in the primary stage, by using the dark field test early. The Wassermann is usually negative in the early stages, so do not be misled by a negative blood test. The dry smears from the chancre may also be used instead of the dark field. After invasion, the body develops some immunity which helps to hold the disease in check; and prevents the person from being reinfected. The patient can, however, be cured and later develop another chancre at another site; this is the best evidence of cure obtainable. In the Wassermann test, we do not test for the organism but for the antibody; it is a test for a reactionary product thrown out from the body cells when they are irritated. This has been called "reagen." The Wassermann test varies greatly in different hands. It is not biologically specific. It can be produced by lipoids in nonsyphilitics. The Wassermann reacton is only positive in syphilis and in frambesia or yaws. There is a tendency toward a positive reaction in some other conditions, but if the best tehnic is used, the false and true positives can be distinguished. The Wassermann is positive in 60 to 80 percent of cases in the primary stage and in 100 percent of the secondary cases. In depending on the Wassermann in the tertiary stages, we are missing many cases, for the Wassermann is not delicate enough for all cases. Paresis is 100 percent syphilis and tabes is 90 percent syphilis.

We should have a sensitive test, if treatment is to be guided by it. The blood may be negative with the spinal fluid positive. Some cases cannot get a negative reaction under any ordinary length of treatment, being the so-called "Wassermann fast" patients. This undoubtedly means that they harbor the infection in the deep tissues or internal organs.

The discussion was opened by Dr. P. B. Newcomb of Tucson, followed by Drs. Sweek, Holmes, Vivian and Goss. Had Dr. Kolmer's paper been the only one presented, it would have been worth going father to hear. Knowing his subject as he does, Dr. Kolmer spoke with understanding simplicity and great earnestness, developing his points with logic and clarity, so that his reputation of being a deep thinker was well sustained.

Thursday Afternoon, 2 o'clock.

Dr. William Engelbach of St. Louis addressed the meeting on the subject of "Treatment of Ductless Gland Disorders," which he illustrated by means of many lantern slides. No man in the country is better qualified to speak on this subject than Dr. Engel-

bach. and several of the members went to the Canyon especially for this paper. Summary:

In classifying the 2000 cases as ductless gland disorders, cases with other diseases are not classified with the ductless gland group, but as the respective disease with ductless gland manisfestations.

1. Ductless gland disorders are as common as any other disease; for instance, as respiratory infections.
2. Ductless gland disorders are easy to diagnose.
3. Ductless gland disorders respond to treatment as well as do other diseases.

Disorders of the thyroid. Hypothyroidism gives poor results in cretinism because of late diagnosis. There are four points; overweight at birth; does not have its teeth at the right time; does not talk at the right time; does not walk at he right time. If not diagnosed early enough and then develops a thyro-pituitary syndrome, there is girdle adiposity due to insufficiency of posterior lobe of pituitary. All the glands have an influence on the osseous development. In hypothyoird cases, the secondary sexual characteristics develop early.

Pituitary disorders. Overweight at birth usually means thyroid insufficiency. Overweight at pre-adolescent period indicates posterior lobe of pituitary insufficiency. Overweight may occur from gonad insufficiency at ages above 30. The anterior lobe insufficiency can be determined by study of the osseous system. The anterior lobe of the pituitary controls the development of osseous and genital system, and posterior lobe the girdle adiposity, etc. Treatment should be instituted as early as possible as the hypophysis is easiest stimulated.

Hypopituitary cases may have all sorts of symptoms, headaches, all sorts of heart attacks, disturbances of menstruation, etc. Most cases have no tumors around the pituitary body. The value of x-ray is on the general osseous system.

In thyroid adiposity; fat collar; moon-shaped face; adiposity extending down extremities; fat pads on back of hands, etc., all in contrast to pituitary hypo-function.

When gonads cease to function or are absent, they do not get fat until after thirty years of age. It is possible that the so-called phthisical chest may be caused by gonad insufficiency. Ovarian substance given by mouth and hypodermically (stroma not corpus luteum) gives good results.

This paper is to be published in an early issue of Southwestern Medicine. It was discussed by Dr. Janney of Los Angeles, followed by Drs. Holmes and Holt.

Dr. Elsworth Smith of St. Louis followed next on the program with his paper on "Quinidin in Auricular Fibrillation."

Quinidin is a new alkaloid used in the treatment of auricular fibrillation. In some 500 cases which have been reported in the literature, it seems that the drug is of distinct value in that condition. In the writer's series of 28 cases, which have been carefully studied, it appears that quinidin is of especial value in restoring the natural rhythem in cases without decompensation. In cases of decompensation, with auricular fibrillation, digitalis was used to restore the compensation prior to the use of quinidin. A small dose of quinidin (3 grains) is used as a test dose to determine if the patient has an idiosyncrasy, prior to the administration of the therapeutic course. Some cases were found to stand very large amounts of the drug without ill effect. One case was given over 1000 grains before normal rhythm was restored. Two cases of the series showed toxic symptoms.

Dr. Fahlen of Phoenix opened the discussion, followed by Dr. Vivian of the same city.

Dr. John M. Dodson of Chicago addressed the Association on the subject of "The Medical Education of the Public," giving a history of the efforts of the American Medical Association to educate the public along medical lines, urging the co-operation of the physicians of Arizona in the effort to establish the magazine Hygeia.

We can create a better feeling toward the medical profession and accomplish more through education of the public than through any other means. Hygeia has a paid up subscription list of 20,000. Arizona was the second state to go over the top in securing the quota of subscriptions asked for, Pennsylvania being the first. The next improvement will be to liven up the subject matter in the magazine by securing more snappy writers, but expect to continue along the same general lines as already planned. The present question is whether they shall continue the special price of $1.00, or charge the straight $3.00 per year. The American Medical Association invites constructive criticism, because they are anxious to know the ideas of the medical profession toward the magazine.

Thursday Evening, June 21.

Dr. H. T. Southworth of Prescott gave the presidential address during the smoker. Following this, Dr. Frederick M. Allen of New York gave his paper on "Insulin in the Treatment of Diabetes."

Dr. Banting discovered insulin, an alcohol soluble substance which will depress the blood sugar. A "unit" is the amount of the extract which will kill a one kilo rabbit within four or five hours. Partial removal of the pancreas will produce chronic diabetes in rabbits. When the Islands of Langerhans are injured, diabetes results.

The effect of insulin is brief, being over in four to six hours; must be given by needle;

if too much is given, there is weakness, tremulousness, perspiration, perhaps coma; antidote is to give glucose, orange juice, etc.

The needs of the body vary, and the insulin must vary with these needs; the diet must be uniform and strike a balance with the insulin. Four to six units is the average; severe cases require as much as 20 units a day. There must be an adequate diet and sufficient insulin to permti its assimilation. The main dangers come from too high dose of insulin. The urine should be kept as free from sugar as possible and the blood sugar as nearly normal as possible.

The complications are infections; local, such as local gangrene in which the control of sugar will cure it; general infections, pneumonia, etc.; tuberculosis, in which the food should be pushed, 3000 to 3500 calories a day; in severe diabetes in tuberculous patients, as much as 90 units of insulin a day may be given.

In coma, usually 100 units or more will be required. Give 25 units into the vein and 25 to 50 units under the skin. Give at least four liters of liquids. Give also 400 gms. of glucose in first 24 hours, as it helps to burn up the acetone. Free diuresis helps to dilute and excrete. Not all cases of diabetic coma can be saved.

The discussion of this paper was opened very ably by Dr. Charles S. Vivian of Phoenix, followed by Dr. Janney of Los Angeles, Dr. Holt of Globe and Dr. Bacon of Miami.

Friday Morning, June 22.

The House of Delegates was called to order at 9 o'clock by President Harry T. Southworth. The roll-call showed delegates present as follows: Cochise, none; Coconino, one; Greenlee, one; Gila, three; Maricopa, five; Mohave, one; Navajo, none; Pima, four; Santa Cruz, none; Yuma, none; Yavapai, two.

The minutes of the previous meeting were read and approved .

The report of the Committee on Necrology was called for; the report of the Committee which was presented at the Prescott meeting was again presented for publication. No new report was made regarding the members dying between the Prescott meeting and the Grand Canyon meeting..

REPORT ON NECROLOGY

Prescott, June 15, 1922.

This Association has lost by death seven of its members since our last meeting—four of them being members of Pima County Medical Society. Only three days following the meeting at Tucson, Dr. A. W. Olcott—a former President of this Association—was killed in an automobile accident. Dr. Olcott had been a resident of Tucson for over a quarter of a century and was most highly esteemed by his fellow physicians and by the people of his community. He was a man of sterling worth and of unusual force of character and moral stamina. His passing is a distinct loss to this Association.

A short time after the death of Dr. Olcott, Dr. Francisco Mimiaga died of cancer of the pancreas. For some years before taking up his residence in Tucson, Dr. Mimiaga had been a licentiate in Arizona—practicing in Nogales, Mexico. He was well thought of by the members of the Pima County Medical Society and will be missed by the people of Tucson.

Very soon after the death of Dr. Mimiaga, Dr. C. Hernandez Leon died. He had been to the coast for the summer, because of failing health, and died a very few hours following his return in the fall. Dr. Leon had practiced in Cananea, Mexico, where he bore an excellent reputation as a physician.

About mid-winter occurred the death of Dr. Chas. T. Dulin. He had practiced his specialty—the eye—for few years in Tucson. formerly being an oculist in the regular army. He made a valiant fight against the "Great White Plague" and was held in high esteem by his colleagues.

Maricopa County Medical Society has lost two members during the last year. Dr. Rob't Brownfield had practiced his specialty—eye, ear, nose and throat—for some ten years. He had a large and choice clientele. He was a member practically of every civic organization and was active in them all. He had been President of his County Society. His untimely death was a great loss to our profession and to his community.

Dr. Robt. Mosser had resided in Phoenix only about one year. Because of ill health he did not take a very active part in his profession. He confined his work to "Internal Medicine."

Dr. C. H. Tyndall went to Yuma as an army surgeon and remained there after being mustered out. He practiced there some two years. He was well liked by the physicians and people of the town. On his way to make a professional call, he was struck by a passenger train and died some two hours later. He was a graduate of Chattanooga Medical College.

W. V. WHITMORE,
JOHN W. FLINN,
Committee.

The Committee on Public Health and Legislation was called for and the Chairman, Dr. Charles S. Vivian, reported as follows:

The committee's report consists chiefly in a report of what we assisted in combating, rather than in actual laws which we helped to pass. We worked toward the defeat of a bill to make the Superintendent of the State Hospital a layman instead of a medical man. This bill seemed to us to be unwise and not

in accord with the best ideas in the treatment of the insane.

We aided in securing the indefinite postponement of a bill repealing the law for the regulation of professional nursing in Arizona.

We assisted in the defeat of a bill which provided for a code for the commitment of the insane by public trial.

The Committee recommends that this Association request the State Bar Association to instruct their Judiciary Committee to meet with the Public Welfare Committee of the State Medical Association, in the near future, to prepare a proper code for the care of the insane, this to be presented to the next state legislature, after approval by the State Bar Association and the State Medical Association.

This report, with its recommendations, was adopted.

In the absence of Dr. John W. Flinn, there was no report from the National Legislative Committeeman.

Report of the Committee on Medical Education was given verbally by Dr. Fred Holmes, Chairman. He stated that Arizona was the first to go over the top in securing its quota of subscribers for Hygeia, and that 125 copies had been placed in the homes and offices of Phoenix alone.

Report of the Committee on Medical Defense was given by Dr. Bacon, verbally.

Report of the Committee on Scientific Work and Program was given by Dr. Holmes, Chairman, who stated that it was represented by the printed program.

Report of the Associate Editor, Dr. W. Warner Watkins, was presented, as follows:

REPORT OF ASSOCIATE EDITOR

(*Made to the Prescott Session in* 1922.)

Some radical changes have taken place in Southwestern Medicine since our last annual meeting, and a detailed report of them is desirable. At the close of the fiscal year of the journal, our contract with the printers who were then handling the journal expired, and could not be renewed even on the terms of the expired contract which was not favorable to the journal, as it stood.

In order to preserve our investment and save the journal from dissolution and failure, your Associate Editor proposed to the Board of Managers that he be made Managing Editor, with power to make whatever changes might be desirable in the journal and to enter into arrangements with another publishing house. Tentative proposals were secured from a pubulishing house in Phoenix for printing the journal and these were submitted to the Board of Managers of Southwestern Medicine, and were accepted in time for the January issue to be prepared under the new managership.

The plan is that we make a bold bid for our proper place in the eyes of our own constituents and in the advertising field, by investing our surplus funds in the journal this year, getting out a journal which will absorb these surplus funds, but which will establish itself as a first-class advertising medium as well as a first-class medical publication. This has been our policy, and before the end of the year, it is expected that we will begin to reap the benefits of this investment and for the next year, can continue our present excellent standard and pay our way on our normal income.

The Managing Editor has taken over all departments of the journal for the present year, advertising, circulation and editorial, and is attending to all these duties, but cannot be expected to continue this indefinitely, as the business details should be in the hands of a business man. It is hoped, by the end of the year, to perfect such an arrangement, but for the present year, it seemed best that all portions of the journal be managed by one individual, so that all complaints could be adjusted, and all portions fo the work coordinated.

Following the new arrangement, the Managing Editor visited El Paso and, later the New Mexico Society and has perfected the financial arrangements, as well as securing excellent co-operation from both organizations. It is hoped that Arizona will continue to support the journal in the cordial manner which has been the chief support of the magazine in years past.

Every suspicion of fault-finding and obstruction has been removed in the other constituent societies which support the journal and they are solidly behind it, and with the editorship now in Arizona, we have the opportunity to make the journal what it has every opportunity to become—one of the most important of state medical journals. We have already been informed by the Advertising Bureau of the American Medical Association that we rank high up among the state medical journals, and are only surpassed in excellence and size by three or four of the larger state journals. This is high praise, indeed, and we should not relinquish the place which we have finally attained.

The following is a brief summary of the report of the Managing Editor, as made to the Board of Managers, at the close of the fiscal year of the journal in December, 1922:

Acting as Managing Editor for the journal we collected from the constituent societies owning Southwestern Medicine, the accumulated funds which were due the Board of Managers, and endeavored to invest them in building up the journal to a position where it would command respectful attention from readers and advertisers. This was accomplished by the end of 1922, and the journal is now self-sustaining on the income from advertising and from the $1.00 per member

paid by the constituent societies. The other $1.00 per member is used for the expenses of the editorial office, in furnishing cuts of illustrations, in paying the extras for special features of the journal, such as an excess of small type, coated paper for cuts, extra pages of the journal above thirty-two pages of text, extra numbers of the journal when required, etc. No funds have, as yet, been used in paying the editor any salary, but it is hoped that something more than at present may be available next year for stenographic services.

The entire report may be summarized, thus: Southwestern Medicine is firmly established; it is a success and can remain a success just so long as it is loyally supported by the members of the interested constituent societies.

At this time, June 1st, 1923, we wish to report that the Associate Editor for Arizona was elected Editor-in-Chief, by the Board of Managers at their meeting in El Paso, in December, 1922. Very satisfactory arrangements were entered into, early in 1923, with a firm of Phoenix publishers, for the publication of Southwestern Medicine, an arrangement which insures the financial success of the journal, and permits us to enlarge it as our income from advertising increases. At the present time, we can publish all the material which is supplied us by all the constituent societies, and all the county societies of Arizona and New Mexico, and El Paso County. We no longer have to solve the problem of securing space; our great problem is to secure desirable material for publication.

It is a pleasure to record that several of the county societies of the state are beginning to co-operate in sending in their news material and reports of their meetings, together with scientific material presented before them. Among the counties who are doing this are Maricopa, Cochise, Yuma and Pima. When the other county secretaries wake up to their obligations and opportunities in this respect, our journal will make a great stride forward.

Report of the Secretary was presented, as follows:

DUES RECEIVED

County—	1922	1923
Coconino		$ 60.00
Cochise		250.00
Greenlee		30.00
Gila		200.00
Maricopa	80.00	720.00
Mohave	10.00	30.00
Navajo		80.00
Pima	10.00	300.00
Santa Cruz		90.00
Yavapai		160.00
Yuma		60.00
Total	$100.00	$1,980.00
		100.00
Grand Total		$2,080.00

Report of the Treasurer was presented ,as follows:

Globe, Arizona,
June 16th, 1923.

The Arizona State Medical Association,
In Convention, June 21st and 22nd, 1923.
Grand Canyon, Arizona.
Gentlemen:

Your acting treasurer has the pleasure of submitting this, the thirty-second annual financial report, covering transactions from June 12th, 1922 to June 16th, 1923.

The source of our income is the annual membership dues and accrued interest on the savings account which wsa started from the Defense Fund.

The funds of the Association are kept in the First National Bank of Globe, Globe, Arizona, in three separate accounts; general account, defense account and defense savings fund.

The annual dues are $10.00 per member, and credited to the defense account and the general account respectively in the ratio of seven to three dollars.

Following is a report of the separate accounts.

Yours very truly,
C. W. ADAMS,
Acting Treasurer.

GENERAL ACCOUNT

Receipts.

June 12th, 1922, Balance in bank	$ 195.93
June 11th, 1922, Pima County, 1 Member	3.00
July 12th, 1922, Maricopa County, 5 Members	15.00
July 17th, 1922, Mohave County, 1 Member	3.00
Aug. 2nd, 1922, Deposited from Defense Fund	500.00
Nov. 5th, 1922, Cochise County, 1 Member	3.00
Nov. 5th, 1922, Maricopa County, 1 Member	3.00
Jan. 10th, 1923, Maricopa County, 1 Member	3.00
Jan. 29th, 1923, Yavapai County, 8 Members	24.00
Mar. 2nd, 1923, Pima County, 15 Members	45.00
Mar. 2nd, 1923, Cochise County, 3 Members	9.00
Mar. 2nd, 1923, Navajo County, 9 Members	27.00
Mar. 2nd, 1923, Coconino County, 6 Members	18.00
Mar. 21st, 1923, Yuma County, 4 Members	12.00
Mar. 21st, 1923, Greenlee, County, 3 Members	9.00
April 9th, 1923, Pima County, 7 Members	21.00
April 9th, 1923, Cochise County, 8 Members	24.00
April 9th, 1923, Santa Cruz County, 2 Members	6.00

April 17th, 1923, S. Cruz County, 6 Members	18.00	
April 17th, 1923, Pima County, 4 Members	12.00	
April 17th, 1923, Maricopa County, 72 Members	216.00	
April 17th, 1923, Mohave County, 3 Members	9.00	
April 17th, 1923, Yavapai County, 6 Members	18.00	
April 25th, 1923, Gila County, 20 Members	60.00	
May 12th, 1923, Cochise County, 6 Members	18.00	
May 21st, 1923, S. Cruz County, 1 Member	3.00	
May 12th, 1923, Yuma County, 2 Members	6.00	
May 12th, 1923, Yavapai County, 2 Members	6.00	
May 28th, 1923, Cochise County, 6 Members	15.00	
May 28th, 1923, Gila County, 1 Member	3.00	
May 30th, 1923, Cochise County, 1 Member	3.00	
May 30th, 1923, Pima County, 2 Members	6.00	
June 16th, 1923, Pima County, 2 Members	6.00	
June 16th, 1923, Cochise County, 1 Member	3.00	
		$1,322.93

Disbursements.

July 11th, 1922, Southwestern Medicine	$ 84.00	
July 11th, 1922, Arizona Industrial Congress	35.00	
Aug. 2nd, 1922, W. W. Watkins for S. W. Medicine	406.00	
Sept. 19th, 1922, Dr. Geo. P. Sampson	10.00	
Nov. 9th, 1922, R. A. Watkins Printing Co.	9.50	
Jan. 29th, 1923, R. A. Watkins Printing Co.	13.50	
Feb. 14th, 1923, A. C. Taylor Printing Co.	15.50	
Mar. 9th, 1923, A. C. Taylor Printing Co.	8.00	
Mar. 9th, 1923, A. C. Taylor Printing Co.	2.25	
Mar. 21st, 1923, Arizona Industrial Congress	50.00	
Mar. 21st, 1923, Mrs. Helen Burns	4.00	
Mar. 27th, 1923, Dr. D. F. Harbridge	25.00	
Mar. 27th, 1923, Mrs. Doris Karpes	2.00	
Mar. 27th, 1923, W. D. O'Neil	4.75	
June 16th, 1923, Balance in bank	653.43	
		$1,322.93

DEFENSE ACCOUNT

Receipts.

June 12th, 1922, Balance in bank	$1,967.00	
July 11th, 1922, Pima County, 1 Member	7.00	
July 12th, 1922, Maricopa County, 5 Members	35.00	
July 17th, 1922. Mohave County, 1 Member	7.00	
Nov. 5th, 1922, Cochise County, 1 Member	7.00	
Nov. 5th, 1922, Maricopa County, 1 Member	7.00	
Jan. 10th, 1923, Maricopa County, 1 Member	7.00	
Jan. 29th, 1923, Yavapai County, 8 Members	56.00	
Mar. 2nd, 1923, Pima Counuty, 15 Members	105.00	
Mar. 2nd, 1923, Cochise County, 3 Members	21.00	
Mar. 2nd, 1923, Navajo County, 9 Members	63.00	
Mar. 2nd, 1923, Coconino County, 6 Members	42.00	
Mar. 21st, 1923, Yuma County, 4 Members	28.00	
Mar. 21st, 1923, Greenlee County, 3 Members	21.00	
April 9th, 1923, Pima County, 7 Members	49.00	
April 9th, 1923, Cochise County, 8 Members	56.00	
April 9th, 1923, S. Cruz County, 2 Members	14.00	
April 17th, 1923, S. Cruz County, 6 Members	42.00	
April 17th, 1923, Pima County, 4 Members	28.00	
April 17th, 1923, Maricopa County, 72 Members	504.00	
April 17th, 1923, Mohave County, 3 Members	21.00	
April 17th, 1923, Yavapai County, 6 Members	42.00	
April 25th, 1923, Gila County, 20 Members	140.00	
May 12th, 1923, Cochise County, 6 Members	42.00	
May 12th, 1923, S. Cruz County, 1 Member	7.00	
May 12th, 1923, Yuma County, 2 Members	14.00	
May 12th, 1923, Yavapai County, 2 Members	14.00	
May 28th, 1923, Cochise County, 5 Members	35.00	
May 28th, 1923, Gila County, 1 Member	7.00	
May 30th, 1923, Cochise County, 1 Member	7.00	
May 30th, 1923, Pima County, 2 Members	14.00	
June 16th, 1923, Pima County, 2 Members	14.00	
June 16th, 1923, Cochise County, 1 Member	7.00	
		$3,430.00

Disbursements.

Aug. 2nd, 1922, Transferred to General Fund	$ 500.00	
Sept. 19th, 1922, Anderson, Gale & Nilsson	1.18	
Nov. 2nd, 1922, Anderson, Gale & Nilsson	65.80	
Mar. 2nd, 1923, R. E. Sloan & C. R. Holton	145.30	
Mar. 27th, 1923, Dr, Win Wylie for Miss Edna J. Olive	36.50	
April 7th, 1923, Sloan, Holton and Scott	27.35	
June 16th, 1923, Balance in bank	$2,653.87	
		$3,430.00

RECAPITULATION

Defense Fund.

Balance in bank June 12th, 1922	$1,967.00	
Total deposits to date from dues	1,463.00	
Savings Fund, June 12th, 1922	1,689.10	
Accrued Interest, July 1st, 1922	33.78	
Accrued Interest, Jan. 1st, 1923	34.25	
		$5,187.33
Total of disbursements	$ 276.13	
Transferred to General Fund, Aug. 2nd, 1922	500.00	
Balance in Checking Account	2,653.87	
Balance in Savings Account	1,757.33	
		$5,187.33

General Fund.

Balance in bank June 12th, 1922	$ 195.93	
Total deposits to date from dues	1,127.00	
		$1,322.93
Total disbursements	$ 669.50	
Balance in bank	653.43	
		$1,322.93

COMPARATIVE TABLE.

Year	Defense Fund	General Fund	Total
1918	$1,692.00	$ 574.15	$2,266.45
1919	2,339.20	778.29	3,117.49
1920	2,952.70	1,213.89	4,166.59
1921	2,962.43	943.23	3,905.66
1922	3,656.10	195.93	3,852.03
1923	2,653.87	653.43	3,307.30

GENERAL COMMENT.

Interest to the amount of about $35.00 will be added to the Defense Savings Fund on July 1st, 1923.

Globe, Arizona,
June 16th, 1923.

The Arizona State Medical Association,
In Convention,
Grand Canyon, Arizona.
Gentlemen:

The foregoing financial report of the treasurer of the Arizona State Medical Association has been compared with his records.

After checking against the cancelled checks and deposits, I find that the balance sheet compares with the new balance brought forward at the close of business today, as is shown in the bank statement which should accompany this report.

Yours very truly,
C. B. ANDREWS,
Accountant.

State of Arizona,
County of Gila.

Before me Vera F. Gundry, a Notary Public in and for the County of Gila, State of Arizona, on this day personally appeared C. B. Andrews, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose and consideration therein expressed.

Given under by hand and seal of office this 16th day of June, A. D. 1923.

My commission expires Aug. 15th, 1923.

VERA F. GUNDRY,
(Seal) Notary Public.

An Auditing Committee, composed of Drs. Kennedy, Moore and Manning, was appointed to vise the books of the secretary and treasurer. They reported the books and records correct.

Under New Business, a motion was made by Dr. Sweek to amend the by-laws so that the name of the Committee on Public Policy and Legislation shall be changed to the Public Welfare Committee. This motion was referred to a committee composed of Drs. Whitmore, Vivian and Holt, which reported favorably on changing Chapter 8, line 4, page 19, of the by-laws, in accordance with Dr. Sweek's motion. (This motion pre-

sented on June 21st, went over until the next day, as provided in the by-laws, and was then carried.)

The president apppointed a committee composed of Drs. Holt, Bacon and Harbridge to suggest changes in the by-laws of the Association, so that they will conform to the recommendations of the American Medical Association, this committee to report at the next meeting.

Motion made by Dr. Bacon to appropriate $35.00 for the 1923 dues of the Association in the Arizona Industrial Congress prevailed.

Following the business session, the scientific program was resumed by a paper by Dr. Philip B. Newcomb of Tucson, Ariz., on "Colloidal Gold Test of Spinal Fluid." This paper was discussed by Drs. Goss and Fahlen. It is published elsewhere in this issue of Southwestern Medicine.

This was followed by a paper by Dr. W. O. Sweek of Phoenix on "Oxides of Nitrogen in Wound Infections." It was discussed by Dr. Bacon, who detailed the excellent results he had obtained in the use of the gas apparatus, designed and built for him under Dr. Sweek's directions. Drs. Holmes and Holt continued the discussion.

Friday Afternoon, June 22.

The first paper of the afternoon session was by Drs. W. A. Holt and William B. Watts, on "Hodgkins' Disease, With Report of a Case." The paper was discussed by Drs. Sweek and Bacon. It is published elsewhere in this issue of Southwestern Medicine.

The next paper was by Dr. Charles S. Vivian of Phoenix, on "Technic of Orchidectomy in Tuberculosis of the Testicle." It was discussed by Drs. Holmes, Sweek and Fahlen of Phoenix and Victor Gore of Tucson.

The next paper was by a visitor, Dr. J. Paul de River of San Francisco, on "The Correction of Deformities of the Nose and About the Orbit." This was discussed by Drs. Bacon and Holt. A summary of this paper is not given, since it appears in full in this issue of Southwestern Medicine.

The paper by Dr. R. D. Kennedy, giving his impressions of "Our Colleagues in South America," gathered during his recent trip with the American College of Surgeons, will be found in the editorial section of this issue of Southwestern Medicine.

Following the close of the scientific program, the open meeting of the House of Delegates convened for the election of officers and completion of the business of the session.

Dr. Charles A. Thomas of Tucson was placed in nomination by Dr. W. V. Whitmore for the office of president for the year 1924, and was elected by acclamation.

Dr. R. D. Kennedy of Globe was nominated for the office of first vice-president, and elected in the same manner.

Likewise Dr. Charles S. Vivian of Phoenix was elected second vice-president, and Dr. A. C. Carlson of Jerome third vice-president.

For the office of secretary, Dr. D. F. Harbridge of Phoenix was elected by acclamation, with expression of approval and commendation of the Association for his faithful services.

For treasurer, Dr. C. E. Yount of Prescott was elected.

For councillor of the middle district Dr. W. Warner Watkins of Phoenix was elected.

Phoenix was selected as the place of meeting for the 1924 session, and the Association adjourned sine die.

Many members took a ride around the rim of the canyon, discussing the amount of water power going to waste before Arizona becomes a member of the Colorado River Pact.

COCHISE COUNTY MEDICAL SOCIETY

(DR. N. V. ALESSI, Douglas, Secretary.)

The Cochise County Medical Society met in regular session at the City Hall in Douglas, Saturday evening, May 12th.

Members present: Dr. A. M. Wilkinson, president, in the chair; Drs. Ferguson, Calderon, Hawley, Greene, Bridge, Randolph, Edmondson, Lund, Fitzgerald, Downs, Adamson, Wright, Tuttle, Smith, Reese, Alessi. Visitor and guest, Dr. Warner Watkins, of Phoenix.

After the meeting was called to order and the minutes of the last meeting had been read and approved, motion was made by Dr. Wright, seconded by Dr. Fitzgerald, that reports of clinical cases be dispensed with, so that ample time be available for Dr. Watkins to present his paper, and that members of the Society could seek what information they desired on the subject. Motion carried.

Dr. Watkins then read a very interesting paper on Hay Fever, lucidly explaining its cause and management, as far as known at present date. He impressed upon the Society the value and dangers of the pollen treatment. It was the opinion of some members of our society that honeysuckle is causing hay fever in our country, but Dr. Watkins was of the opinion that this could not be true, since hay fever is due to wind borne pollen and not to insect borne pollen; however, he said that he would make some pollen extract for use in testing such suspected cases, next season. There was a lively hour on the subject of hay fever, in general, in which the author of the paper answered all questions that were asked.

Dr. Lund reported a case of a woman, aged 50, whom he had seen at 1 p. m., having what seemed to be laryngismus stridulous; she had a great deal of difficulty in breathing, color good, pulse, temperature, heart and chest normal; throat normal; one-half grain of codeine was given; about 4 p. m. she was seen again, at which time her condition was worse; throat and larynx were examined by Dr. Wilkinson, who reported them to be normal; another half grain of codeine was given, with benzoin inhalation and ice cap to the neck. At 8 p. m., difficulty in breathing was worse, and one-quarter grain of morphine with 1/150 of atropine by hypo. was given. In half an hour patient was asleep, but sterterous breathing was still present. Two one-quarter grain morphine tablets were left to be given one every three hours if necessary; one of these tablets was given at 11 p. m. Was called to see her again at 1 p. m., and found patient unconscious, pupils contracted, pulse weak, respiration shallow, and slow. Various stimulants were given and artificial respiration was used, but patient died at 1:30 a. m.

Dr. Greene reported a case of nephritis following varicella.

Dr. Lund reported a case of a man who had cut his finger on some kind of a container at the smelter; within an hour he developed pain in the shoulder; a little later, a rise in temperature and rapid pulse; on the second day, a swelling in the axillary fold appeared, and one drop of pus was seen in the wound on the finger, but no streaks running up the arm or forearm. In a few days the wound in the finger had healed completely, but the patient became progressively worse and died. Postmortem examination showed necrotic subcutaneous tissue, with pus in the muscles, pus in the pleural cavity, purulent pericarditis, and multiple abscesses of the lungs.

Meeting adjourned.

MARICOPA COUNTY MEDICAL SOCIETY

(Phoenix, Ariz.)

The Maricopa County Medical Society held its final meeting of the season on Saturday evening, May 19th, meeting for dinner at the Business and Professional Women's Club rooms, at 17 E. Monroe, at 6:30.

There were twenty-five members present, as follows: Drs. Garrison, Wilkinson, Goss, Hicks, Carson, Neff, Thayer, Vivian, Yandell, O'Neil, Felch, Mills, Bailey, Drane, Sult, Coit Hughes, Holmes, Schwartz, Bakes, Couch, Fahlen, Wylie, Greer, Smith and Watkins.

The guest of the evening was Dr. E. D. Kramer, of Pasadena, Calif., a member of the medical staff of Las Encinas Sanatarium.

Dr. Kramer gave an address on the "Prognosis and Treatment of Chronic Arthritis." He gave a very clear and understandable classification of arthritis, based on etiology, and recited statistics of his series of cases, treated while in the Government hospital at Hot Springs. This paper is to be pub-

lished in an early issue of Southwestern Medicine.

Dr. Smith, in discussion, thought the most important therapeutic measure was to thoroughly flush the patient with water; thinks this is the cause of the good results obtained at springs and resorts; patients are required to drink large quantities of water.

Dr. Bakes said that the subject was not in his line of work, but he thought the intravenous vaccine would be good, because it acts so well in iritis, and the result should be the same in joint conditions. It usually causes a great reaction, but the resulting good effects are correspondingly great.

Dr. Vivian agreed with Dr. Smith about the value of lots of water. But why not find out the things which we do not know in these cases? By watching the elimination from the kidneys, we can check the effects of the flushing by water, or the effects of drugs.

Dr. Yandell is interested because he has had two cases in the last year and a half where there was intense pain with enlarged joints. In these two cases, the tonsils were removed with complete relief of joint conditions.

Dr. Neff inquired whether arthritis occurred in paresis.

Dr. Wilkinson inquired regarding the use of diathermy or heliotherapy.

Dr. Mills inquired why typhoid vaccine was chosen for the non-specific protein therapy mentioned in the address.

Dr. Kramer replied to the discussion and questions. The matter of elmination of course is important. Many believe that intoxication from the colon causes arthritis. Elimination must be secured and removal of any source of infection must be accomplished. He has had no experience with arthritis in paresis. It frequently occurs in other forms of syphilis and could, no doubt, occur in paresis. Has had no practical experience with diathermy or heliotherapy. The idea is good and there is no reason why it would not be useful. Has tried helotherapy without brilliant results, but the mercury light has given good results in certain types of cases. They use typhoid vaccine because they knew the effect of certain doses of this organism from the numerous injections made in the army, and are familiar with the reaction on which the scale of dosage is to be based. Has no other virtue over other forms of protein.

Dr. Goss showed the radiographs of three children in the same family, each having double congenital hip dislocation. They are children in a family of seven, with the same father and mother. The family history is negative. The ages are three, eight and fourteen. This very interesting group of cases will be reported in more detail in this journal at some future date, with the radiographs.

Meeting adjourned to meet at the call of the president, the first week in October.

ST. JOSEPH'S HOSPITAL STAFF MEETING

(Phoenix, Ariz.)

The final meeting of the season was held in the lecture room of the hospital on Thursday evening, May 17th. There were about fifteen members of the staff present.

The first case presented and discussed was a very interesting one by Dr. C. B. Palmer. The patient had had a well marked carcinoma of the stomach, well shown by radiographs, which placed it on the borderline of the operable group. The pylorus was resected by Dr. Palmer on June 23rd, 1921, practically two years ago. The patient is apparently in good health and recent radiographs show no perceptible involvement of the stomach, and there are no symptoms, as yet, suggesting a return of the cancer. Pathological examination of the excised pylorus, at time of operation, confirmed the diagnosis of carcinoma.

The second case was presented by Dr. Schwartz. The patient, a man, had suffered an accident on May 10th, when a drop of water fell from

a pipe into his eye. He awoke the next morning with the eye closed and could not open it. He can see perfectly when the lid is lifted for him. Several of the specialists present examined the eye. He admits a venereal sore 19 years ago, but took no treatment for lues. Wassermann was one plus positive. He had noticed no trouble until the drop of water fell into his eyes. He has no general neurological findings: no less of reflexes, either in the extremities or the eyes. Lesions of this character, from lues, are usually located in the lower end of the nucleus of the nerve, though they may be in the cortical centers.

Lesions elsewhere in the brain may produce slight ptosis. The higher center of ptosis is in the frontal lobe. Nothing abnormal shows in the fundus; vision is normal with a plus 50 sphere.

There was a suggestion that a lumbar puncture might show some abnormalities.

Dr. McLoone recalled a case with fracture of the base in which there was paralysis of all the muscles supplied by the third nerve.

Dr. Schwartz concluded that the drop of water of course had nothing to do with this ptosis, although it is difficult to make the patient admit this, since he is seeking compensation for injury.

Dr. Smith gave a very interesting and detailed resume of his famous case, "Ada M." The final chapter of this case has not yet been written, as she is still alive and recently came safely through her fifteenth major operation.

Her first operation was for mastoid disease, then several abdominal operations, in one of which the colon was supposed to have been removed entirely. She is a tuberculous patient, and one of her x-ray examinations brought forth the diagnosis of tuberculous involvement of the descending colon, which operation proved to be fallacious. She has been a surgical curiosity, or, as Dr. Smith stated, some might prefer to say that she had been a victim of surgical curiosity. When a recent operation revealed that her colon was intact and had never been removed, it became evident that all her operations had been chiefly exploratory. More recently, she has been opened in order to relieve adhesions which threatened to cause complete obstruction. She is a tuberculous patient, but the abdominal conditions have not seemed to be tuber culous.

Dr. Smith gave a record of her experiences with the object of bringing home two lessons; one, how much a human being can stand and still live; the second, how meddlesome surgery and needless surgery can entail a life of misery upon the patient. Operations performed on her several times during the past five years have been for the purpose of relieving the obstructive adhesions which were started by previous explorations.

Dr. Watkins recalled how Dr. Mills had insisted that there was a barium outline which looked exactly like a colon, but Dr. Smith emphatically stated that this could not be true, because the colon had been removed and he had, himself, seen inside the abdomen and knew the colon was not there. Another operation, following soon after the x-ray examination, showed that the colon was present, and the radiograph had scored over the surgeon's exploration. More recently, however, the honors were reversed, when the diagnosis of tuberculosis of the colon was positively made, and operation, with removal of the suspected area, showed no tuberculosis.

Dr. Vivian reported and discussed a case of coma which had entered the hospital, diagnosed as uremia. The symptoms were not entirely typical, and there were other possibilities. It illustrated the oft-repeated observation that diagnosis on patients dying soon afterwards, are of little teaching value, unless there is a post-mortem examination. None could be secured in this case and the diagnosis of uremia could be called nothing but a probability.

THE SANTA FE COUNTY MEDICAL SOCIETY

(DR. LEIGH K. PATTON, Secretary.)

At the regular monthly meeting of the society, held at St. Vincent Sanatorium, June 12, 1923, it was voted to extend to the New Mexico Medical Society an invitation to hold its 1924 meeting in Santa Fe. The city now has adequate hotel facilities and can take care of delegates and other visiting physicians, while it offers many attractions for their entertainment in side trips and sights in and about the old city. The Santa Fe Chamber of Commerce will also send an invitation to the society in the name of the city.

Dr. J. S. Perkins of the U. S. Indian Service, was a visitor at the meeting. He gave a brief talk, saying that he has been doing eye, ear, nose and throat work among the Indians of New Mexico and southern Colorado. He sees many eye cases, 90 per cent of which are trachoma and its complications. Simple corneal ulcer is the most common of these complications; and its treatment consists in the general treatment for trachoma, with phenol locally. Pannus, another complication, usually clears up with the trachoma; but the speaker sometimes uses jequirity locally. Serpiginous ulcer is also encountered in these cases, accompanied by pus in the anterior chamber of the eye.

Dr. Ward reported improvement in a case with low hemoglobin on sunbath treatment.

Dr. D. B. Williams, state supervisor of county health officers, said that health officers ought to cultivate the county medical societies more than they do and ought to seek the cooperation of the family physician, who can do much in helping the health officer in his work.

Dr. R. O. Brown told of a baby eleven months old brought into the hospital in an amaurotic state and with symptoms resembling tetany. The child had been fed on unmodified cow's milk since four months of age. Some improvement was noticed after a diet of vegetables, cereals, and fruit, with gr. v calcium chloride in an ounce of milk t. i. d. The child was then taken from the hospital and away from observation.

Dr. Patton told of the proposed work of the Toren Restoration Hospital at Oconomowoc, Wisconsin, where he intends to go in July as resident physician. The hospital plans to treat certain mental and nervous cases after the methods of Dr. Henry A. Cotton, head of the New Jersey State Hospital at Trenton. Dr. Julius A. Toren is medical director. Dr. Cotton treats cases of so-called "functional" insanities, such as manic depressive insanity, melancholia, dementia praecox, and the like, from the standpoint that all these are caused by focal infections and resulting toxemia acting upon the brain tissues. He has found infections in teeth (abscesses, impacted molars, granulomata), tonsils, intestines (ulcerations), genitalia; and he has carried out treatment in a thoroughly radical manner, with some excellent and startling results. His series of lectures delivered at Princeton on this topic is issued by the Princeton University Press.*

At this meeting Dr. Harry P. Mera, new full-time county health officer to succeed Dr. Douglas Brown, was elected to membership. Dr. Patton resigned as secretary, and Dr. H. S. A. Alexander was elected to succeed him.

In this, the retiring secretary's final letter, he wishes to say farewell to his friends in Santa Fe, Albuquerque and other places in the southwest.

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*—"The Defective Delinquent and Insane. The Relation of Focal Infections to their Causation, Treatment, and Prevention." By Henry A. Cotton, M. D., Medical Director of the New Jersey State Hospital at Trenton; Lecturer in Psycho-pathology, Princeton University; Director of Prychiatric Clinic for Correctional Institutions of New Jersey. Lectures delivered at Princeton University, January 11, 13, 14, 15, 1921. Printed under auspices of Louis Clark Vanuxem Foundation by Princeton University Press, Princeton, N. J.

CHAVES COUNTY MEDICAL SOCIETY

Roswell, N. M., June 1, 1923.

The Chaves County Medical Society has been doing some good work this year. We subscribed for the "Case Reports of the Massachusetts General Hospital" and find them not only interesting but instructive as well.

At our last meeting, May 29th, we had Dr. K. D. Lynch, a genito-urinary surgeon from El Paso, with us and he addressed the assembly on the subject of "Prostatic Surgery." His lecture was very interesting and instructive, showing his familiarity with the subject under consideration. After the meeting, which was held at the clubhouse of the Roswell Country Club, a very enticing lunch was spread in the cool and spacious dining room.

We enjoyed Dr. Lynch's visit to the extreme and a vote of thanks was given him in appreciation of his talk and visit. Come again, Dr. Lynch, you will always find the "latchstring hanging on the outside."

Usually the society takes recess through the hot months, but this time we have decided to continue our meetings as usual.

C. M. YATER, Sec'y.

SAINT JOSEPH HOSPITAL AND SANATORIUM

(Albuquerque, N. M.)

The regular monthly meeting of the staff of St. Joseph Hospital and Sanatorium was held on Tuesday evening, May 15, 1923. There were about a dozen members of the staff present. This being the last meeting until September, no formal program was presented.

The evening was spent in an informal discussion of cases which were presented verbally by various members of the attending staff. These cases covered a rather wide range of clinical manifestations, in most of which a diagnosis had not yet been reached. The discussion was freely entered into by the various members present, and it proved to be a very enjoyable and instructive evening. On account of these cases not being hospital cases, and the recorder not having access to the private records of the various physicians, no effort will be made here to give an outline of the cases.

Dr. J. A. Reidy presented the patient upon whom an appendicostomy had been performed and the bowels subsequently treated with mercurochrome in an attempt to improve a tuberculous colitis. This patient had made noteworthy progress toward recovery, being able now to enjoy comparatively good meals without resulting gastro-intestinal distress. Dr. Reidy promises subsequent reports of his progress.

SANTA FE COUNTY MEDICAL SOCIETY

PERSONALS

DRS. ROBERT O. BROWN and FRANK E. MERA of Santa Fe, traveled by motor to the meetings at Santa Barbara and San Francisco.

DR. HARRY P. MERA, until recently of Abilene, Kan., has moved to Santa Fe and has purchased property, upon which he is building an attractive home in the "new-old Santa Fe style." In association with his brother, Dr. Frank E. Mera, medical director of Sunmount Sanatorium, the doctor previously has lived and practiced in Santa Fe. On June 1st, he succeeded Dr. Douglas Brown as full-time health officer of Santa Fe county.

EL PASO COUNTY MEDICAL SOCIETY

(*DR. F. O. BARRETT, Secretary.*)

A special meeting was called and a dinner given by the El Paso County Medical Society at Hotel Sheldon, El Paso, Monday evening, June 18th, to Major-General Merritt W. Ireland, Surgeon-General of the United States Army. The subject of the General's talk is "Preparedness.", There were a number of the prominent citizens of El Paso present, several of whom in short talks, addressed the meeting, viz.: Hon. R. M. Dudley, Mayor of El Paso; Judge Ballard Coldwell, Lieut.-Col. M. A. W. Shockley, commanding officer of William Beaumont General Hospital.

A special meeting of the El Paso County Medical Society was held Saturday evening, June 23rd, at the University Club, to meet Dr. William Sharpe, Professor of Neurological Surgery at the Post-Graduate School, New York. He addressed the Society on "Recent Advances in the Field of Neurological Surgery and Especially in Diagnosis and Treatment of Brain Injuries." Dr. Sharpe was on his way to San Francisco to present a paper on the same subject at the meeting of the American Medical Association.

EL PASO COUNTY NEWS

The MILE HIGH SANITORIUM is now in operation. Supported by the Associated Charities and the El Paso Forum, this institution cares for the less fortunate children of the poor districts of the city. The capacity is small, twenty at a time, hence acute cases are not taken. Convalescent cases selected from the county and city clinic are kept until their condition will warrant return in safety to the city. Dr. H. H. VARNER is the physician in charge.

DR. E. W. REINHEIMER is the proud father of a daughter, Mary Elizabeth, born June 21st, 1923.

DR S. HAFFNER is just recovering from an operation. He expects to return to his practice very shortly.

The babies' milk fund being raised in El Paso for feeding the less fortunate sick infants of this city had a substantial boost during the early part of June in quite an unique way. Big-hearted "BILLY MATHEWS," sergeant of the city police force, formerly an expert in boxing, published a challenge to fight, the entire proceeds to be given to the babies. The publication was hardly made when accepted by Rev. S. J. T. WILLIAMS, assistant pastor of the First Baptist Church of this city. The affair was a grand success and the Milk Fund received a check for over $1200.00.

DR. R. H. MILLWEE, radiologist of Dallas, Texas, stopped in El Paso for a short visit on his return trip from San Francisco where he attended the meeting of the Radiological Society of North America.

MISS GERALDINE BORLAND resigned her position as superintendent of the El Paso Masonic Hospital and left to accept a position in Chicago, on June 5th. Her successor has not yet been appointed. During the interim Mrs. J. A. REEDER is conducting the affairs of the institution.

DR. D. E. SMALLHORST this month received commission as Major in the Medical Reserve Corps of the army.

DR. B. W. WRIGHT has left El Paso to locate in Los Angeles, California, where he will resume his specialty, urology. Climatic conditions in a low moist altitude seem to the advantage of his wife's health, hence we lose to Los Angeles a very energetic and capable physician.

DR. R. G. FULLER, formerly of Cragmor Sanitorium, Colorado Springs, Colorado, is a member of the staff of the Hendricks and Laws Sanitorium, El Paso, as Resident Physician of the institution.

DRS. H. H. STARK, J. A. RAWLINGS, W. L. BROWN, J. W. LAWS and GEORGE TURNER from this city attended the meeting of the American Medical Association at San Francisco, in June.

DR. W. L. BROWN attended the twenty-fifth celebration at Alamagordo, N. M., and addressed the citizens on the subject of financing the new Gilbert Memorial Hospital to be erected there.

DR. H. E. STEVENSON left El Paso June 3rd, for an extended trip overland to the Pacific Coast through California and the states north.

DR. ALVIN KIRMSE for the past year associated with Dr. HUGH CROUSE of this city, has returned to his old home, Marinette, Wisconsin. Illness of his aged father is responsible for his sudden change. Dr. Kirmse will probably locate later in Milwaukee or Chicago.

DR. H. S. HOWELL, who has until recently been physician-in-chief at the Baptist Sanitorium, El Paso, has returned to Colorado Springs, Colorado, to locate, where he will confine his efforts to general diagnosis work.

THE CLOUDCROFT SANITORIUM, for the care of babies of this city who require cooler climate, is now open.

DR. W. S. MALLOY, Assistant City Health Officer, has been reappointed to that position.

DR. J. W. BROWN, full-time Health Officer, appointed to that position by Mayor Charles Davis duirng his administration, succeeds himself by reappointment by Mayor R. M. Dudley, our recently elected chief executive.

DR. SHAVER of Carrizozo, N. M., visited the city during the month, having made the trip to bring a patient to one of our hospitals.

DRS. W. L. BROWN and J. W. CATHCART attended the New Mexico State Medical meeting at Albuquerque, N. M., and read papers.

DR. J. C. HOLMES of Alamagordo, N. M. stopped in El Paso for a short while on his way to the Albuquerque medical meeting.

DR. J. S. HORSLEY of Richmond, Va., spent a short visit with old friends in El Paso before completing his trip to Albuquerque where he presented a paper before the New Mexico State Medical Society.

DR. DABNEY of Columbus, N. M., spent a short time in this city. He accompanied a patient here to the hospital.

DR. W. W. WAITE of El Paso is taking an extended overland trip with his family through California.

DR. F. C. DIVER, chief surgeon of the Dawson Coal and Fuel Company, spent a short visit in this city during June.

DR. BURLISON STATEN, El Paso, during the early part of June, went to Rochester, Minn., where he has undergone an operation. He is reported as doing well. He expects his absence from the city to be rather prolonged, probably several months.

DR. W. E. VANDEVERE, formerly interested in the Long Sanitorium for tuberculosis, has withdrawn from the institution, and is practicing independently.

DRS. LARRABEE and JONES are remodeling their Roberts-Banner X-Ray Laboratory and are preparing to install a new 280,000-volt Kelly-Koett apparatus for deep therapy work. This is said to be the last word in this kind of equipment. Later these doctors expect to install a similar instrument in their Two Republics Life Building offices. El Paso is fortunate in having another complete up-to-date x-ray laboratory.

THE ARIZONA DEACONESS HOSPITAL AND HOME

(Phoenix, Ariz.)

The hopes and plans of thousaids of people in Phoenix and surrounding country were realized in the formal dedication of the "Deaconess Hospital" on Sunday afternoon, June 24.

In an open air service of an hour and reception which extended through the afternoon, the hospital was formally presented by the Board of Trustees to the Methodist Episcopal church, and the hundreds of friends and visitors allowed to inspect the bluilding and furnishings from basement to roof garden.

The chief speaker was Rev. E. N. Davis, D. D., the Corresponding Secretary of the Board of Hospitals and Homes of the Methodist Episcopal church, who told how the eyes of the hospital world had long been fixed on Phoenix and they rejoiced with the community in the completion of this institution.

The financial report, given by Dr. Rogers, revealed the interesting fact that there had been invested in the building, grounds and furnishings nearly $350,000.

The hospital is a very modern institution, equipped throughout with the best surgical and medical equipment. It will accommodate 105 patients.

It has not, as yet, organized its medical staff, but assurance has been given that this will follow the Minimum Standard requirements of the College of Surgeons and Hospital Association. To meet the requirements of the community and the medical profession, it will, of necessity, be of the open staff type of organization.

NEW AND NONOFFICIAL REMEDIES, 1923, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1923. Cloth. Price, postpaid, $1.50. Pp. 415+XXXVI. Chicago: American Medical Association, 1923.

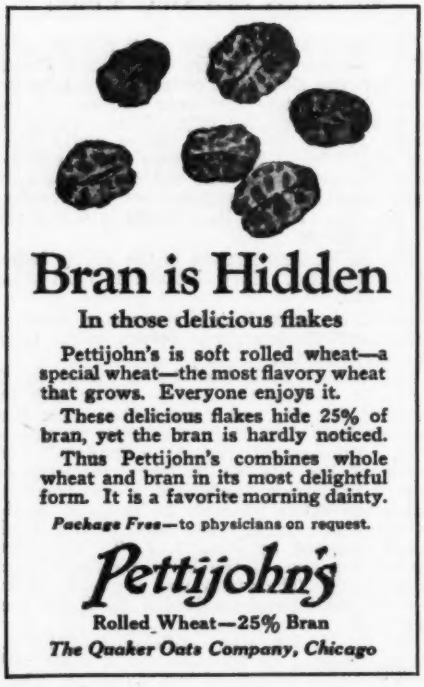
The progressive, up-to-date physician cannot dispense with the newer remedies, proprietary and nonproprietary. Yet he can neither select them on the basis of the manufacturers' claims alone, nor devote his patients to experiments while he tries out those claims.

New and Nonofficial Remedies is the publication of the Council on Pharmacy and Chemistry through which this body annually presents the American medical profession with disinterested, critical information about the proprietary medicines which are offered to the profession, and which the Council deems worthy of recognition. In addition to the descriptions of proprietary preparations, the book contains descriptions of those nonofficial remedies which the Council deems deserving of consideration by the profession.

A valuable feature of the book is the grouping of preparations in classes. Each of these is introduced by a general discussion of the group. Thus the silver preparations, the iodine preparations, the arsenic preparations, the animal organ preparations, the biologic products, etc., each is preceded by a general thoroughly up-to-date discussion of the particular group. These general articles compare the value of the products included in the group with similar pharmacopeial and other established drugs which it is proposed that these proprietary preparations shall supplant.

A glance at the preface of this volume shows that the book has been extensively re-

(Continued on page 270)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In those delicious flakes
Pettijohn's is soft rolled wheat—a special wheat—the most flavory wheat that grows. Everyone enjoys it.
These delicious flakes hide 25% of bran, yet the bran is hardly noticed.
Thus Pettijohn's combines whole wheat and bran in its most delightful form. It is a favorite morning dainty.
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Radium Vault and Emanation Apparatus

A Corner of the Clinical Laboratory

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A thoroughly equipped institution affording unexcelled facilities for Radio Therapy and the scientific study and treatment of Neoplastic diseases.

RADIUM Laboratory possesses a large and adequate quantity of Radium, emanation apparatus and all necessary appliances, affording the most complete facilities for Radium Therapy. Also Radium emanation for internal administration in appropriate cases.

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HOSPITAL, offices, examining rooms, laboratories, and clinic located in the new fireproof building.

This institution, through the correlation of its various departments and personnel, desires to cooperate with the Medical Profession in the diagnosis and treatment of appropriate cases. Your inquiry or request for specific information on any point will be welcome.

REX DUNCAN, M.D.
Medical Director

CALVIN B. WITTER, M.D.
Roentgenologist

EDWIN D. WARD, M.D.
Assistant Medical Director

T. C. CROWELL, M.D.
Pathologist

A TRIUMPH OF COLLOIDAL CHEMISTRY

A protein protection around the particles of silver that makes silver iodide freely soluble in water

FROM the chemist's standpoint Neo-Silvol is one of the most fascinating products that we have ever marketed. Though silver iodide is insoluble in water, Neo-Silvol, which contains 20 per cent of silver iodide, is readily soluble in water and remains in solution for a long time. The silver iodide is in colloidal form.

The silver iodide in Neo-Silvol is in such a fine state of subdivision that in solution it passes through the finest filter paper without loss. The ultramicroscopic particles of silver iodide are kept from coalescing by the presence of a soluble protein substance in the Neo-Silvol which acts as a protecting colloid. Silver iodide has never before been marketed in solid colloidal form.

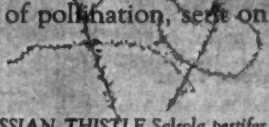
Solutions of Neo-Silvol show the Brownian movement of the colloidal particles. Under the dark field of a powerful microscope these particles of silver iodide can be seen darting back and forth continuously. The average germicidal efficiency of Neo-Silvol is about the same as that of carbolic acid, but against the gonococcus Neo-Silvol seems to have a selective action. Our bacteriologic tests show that the gonococcus is destroyed by Neo-Silvol very much more rapidly and completely than by a carbolic acid solution of the same strength; 1:5000 Neo-Silvol is equal to 1:250 carbolic acid in its action on the gonococcus.

PARKE, DAVIS & COMPANY

DETROIT, MICHIGAN

Weed Hay Fever

THE Late Summer and Early Autumn Type of Hay Fever is caused by many of the common weeds, as–Ragweed, Russian Thistle, Sage Brush –the species differing widely according to locality. To assure specific treatment diagnostic tests are essential. To assure preseasonal treatment early diagnoses should be made,–otherwise the less desirable, though often beneficial, coseasonal treatment will be involved. List of late flowering weeds, showing regional distribution and time of pollination, sent on request.



GIANT RAGWEED *Ambrosia trifida*

RUSSIAN THISTLE *Salsola pestifer*

SAGE BRUSH *Artemisia tridentata*

The Arlington Chemical Company

Yonkers, New York

(Continued on page 266)

vised. In fact each edition of New and Nonofficial Remedies is essentially a newly written book, brought up to date by those who speak with authority on the various phases of therapeutics.

Physicians who wish to know why a given proprietary is not described in New and Nonofficial Remedies will find the References to Proprietary and Unofficial Articles not found in N. N. R. of much value. In this chapter (in the back of the book) are given references to published articles dealing with preparations which have not been accepted.

New and Nonofficial Remedies should be in the hands of all physicians who prescribe drugs. The book contains information about the newer materia medica which cannot be found in any other publication.

The book will be sent postpaid by the American Medical Association, 535 North Dearborn Street, Chicago, on receipt of one dollar and fifty cents.

(Continued from page 251)

was necessary for the reorganized Health Department to energetically follow.

Notwithstanding that the tuberculous death rate is enormously high, being 570 per one hundred thousand population in 1921, nothing has been done in the past in any way to tend to lower this rate. That this high rate was due to the deaths of the tuberculars contracting their disease elsewhere has been the usual excuse for this high rate. With the obtaining, however, of death records having thereon the information allowing for analysis, it has been shown that the rate for locally contracted tuberculosis is far too high. Here again we have indicated a line of activity that must be followed.

Carrying on public health work tending to lower baby death rate and the tubercular rate calls into play practically all of the divisions of a public health organization, and with the lowering of these two death rates will come also a lowering of the death rate from other communicable diseases.

The organization of the Health Department follows the usual lines of municipal health organizations, although in this city it was necessary to incorporate with it medical charities.

It was attempted insofar as the

Purebred
Holstein Milk

Referring to milk for infant and invalid feeding, in his book "Autointoxication," Dr. J. H. Kellogg, of the Battle Creek (Mich.) Sanitarium, says:

"It seems to be pretty well settled among those who have had considerable experience in milk feeding that an excess of fat is decidedly injurious, lessening digestibility and encouraging intestinal putrefaction. Holstein milk contains a liberal supply of sugar, and the smaller amount of fat is a decided advantage. For many years the only milk employed for table use in the feeding of patients in the institution under the writer's supervision has been that supplied by a fine herd of Holstein cattle."

Full information gladly given upon request.

EXTENSION SERVICE
The Holstein-Friesian Association of America
230 East Ohio Street CHICAGO, ILLINOIS

Oats—2465

Bread, 1060 Meat, 1460

Professor H. C. Sherman, in his "Chemistry of Food and Nutrition," gives composite ratings to various foods, based on a new system of scoring. This system is based on calories, protein, phosphorus, calcium and iron.

Oats are rated at 2465—highest of all the grain foods quoted. And higher than any other food save hard American cheese.

Quaker Oats holds supreme place the world over, due to exquisite flavor. It is flaked from only the finest grains—just the rich, plump, flavory oats. We get but ten pounds from a bushel. This super-quality makes the oat dish delightful.

Quaker Oats

The Extra-Flavory Flakes

same was possible to bring under the direction of the Health Officer all public health activities in order that wasted effort might be reduced to a minimum, this being particularly true insofar as the public health nursing service was concerned. The School Board, the Associated Charities and the Council of Catholic Women placed their nurses under the direction of the supervising nurse of the Health Department and they, together with the Health Department nurses, were operated as one unit.

Public health nursing was practically an innovation in El Paso, and it was particularly gratifying to be able to have the work started with a corps of nine public nurses under the supervisor. The work of this corps during the short period that it has been in existence is the outstanding feature of the health work, and is and will be largely responsible for any appreciable lowering of the death rate. The work of this corps has covered school inspection with the formation of nutrition classes, increased activity of the baby clinic, pre- and post-natal work, follow-up work in the homes, control over mid-wives, little mothers' classes and the like.

More efficient control over communicable diseases, improvements of conditions in tenements, and more rigid control over milk supplies have been carried on.

Through the building up of the registry division, it has been possible to obtain death records, which are possible for analysis, and to bring birth reporting to at least 98 per cent.

While the reorganized department was not functioning until September 1, the effect of the work during the last four months of the year is reflected in the death rates, some of which are given herewith:

	1921	1922
Gross death rate per 1,000 population	25.2	20.6
Diarrhea and enteritis under 2 years per 100,000 population	379	217.5
Infant death rates per 1,000 births	168	144.6

Since El Paso is one of the latest cities to institute public health work under a full time health officer, the organization and work to be carried on may be of some interest.

The Board of Health, of which the mayor is chairman, consists of three members, two of whom must be physicians and members of the El Paso County Medical Society, the health officer being an ex-officio member and acts as secretary. While under the law questions of regulations and enforcement of health legislation are delegated to the Board of Health, it is, notwithstanding, distinct from the Health Department in that the Health Department is not under the Board of Health. The Health Department proper comes directly under one of the aldermen or commissioners, although under the city charter the health officer himself must be appointed by the mayor.

As reorganized the department has the following divisions and active work is being carried on under each of these divisions:

1. Administrative—Publicity, education and vital statistics.

2. Communicable Disease Control, under which comes the smallpox isolation hospital.

3. Medical Charities, hospitalization being handled through the county hospital.

4. School Inspection, in co-operation with the school board.

5. Pre- and post-natal work.

6. Infant Welfare, in connection with the county clinic and Associated Charities.

7. Milk and Food Inspection.

8. Sanitary Inspection, including tenement inspection.

9. Clinics—dental clinic and food handlers' clinic, operated by the city: venereal disease clinic, operated jointly by the city and county: and the general clinic, operated by the county.

In an organization for a city the size of El Paso, it is, of course, necessary that two or more of the above divisions of the work must of necessity come under the same personnel, and that the public health nursing staff must be more or less connected

with practically all the activities.

The school inspection, while entirely under the direction of the Health Department, is at present partially supported by the school board.

The personnel of the Health Department consists of a full time health officer, who not only directs the work of the organization, but also handles the publicity and educational work.

One full time assistant health officer, who is in charge of communicable disease work and the medical charities.

The school inspection is directly under the health officer, three part time medical inspectors being employed and such of the nursing staff as is necessary for this work. In addition to the nurses employed directly by the Health Department, the school board hires three nurses and three hygienists.

The pre- and post natal work and the infant welfare work is under the direction of the supervising nurse and is carried on in co-operation with the baby clinic.

Milk and food inspection is under the direction of a veterinarian with one inspector who is a veterinarian and three lay-inspectors, and the sanitary inspection under a chief inspector and three inspectors.

The public health nursing corps consists of a supervisor and six nurses, exclusive of the nurses furnished by the school board.

In addition to the above force there is an office force consisting of a registrar, stenographer and one clerk employed jointly by the Health Department and the sanitary department.

The dental clinic is in charge of a dentist giving one-half of his time to the work, the nursing service being supplied by the nursing corps.

The food handlers' clinic is in charge of a part time medical man, with one nurse and one clerk.

The venereal disease clinic, which is carried on jointly by the city and county, is in charge of a part time medical man and one nurse.

The baby clinic is operated by the county, the nursing corps of the Health Department supplying the nurse.

All part time medical men employed by the department are required to give certain specified hours each day to the work.

The summary of the personnel therefore shows two full time medical men, five part time medical men, two full time veterinarians, eight public health nurses, in addition to the three supplied by the school board; three hygienists supplied by the school board; one registrar, seven inspectors, superintendent, matron and assistant at the isolation hospital, one stenographer and two clerks; making a total of twenty-three full time employees and five part time employees.

The budget for the year 1923 was $85,625, including hospitalization. Eliminating hospitalization there is left $68,980 or 76.6 per capita for purely health work.

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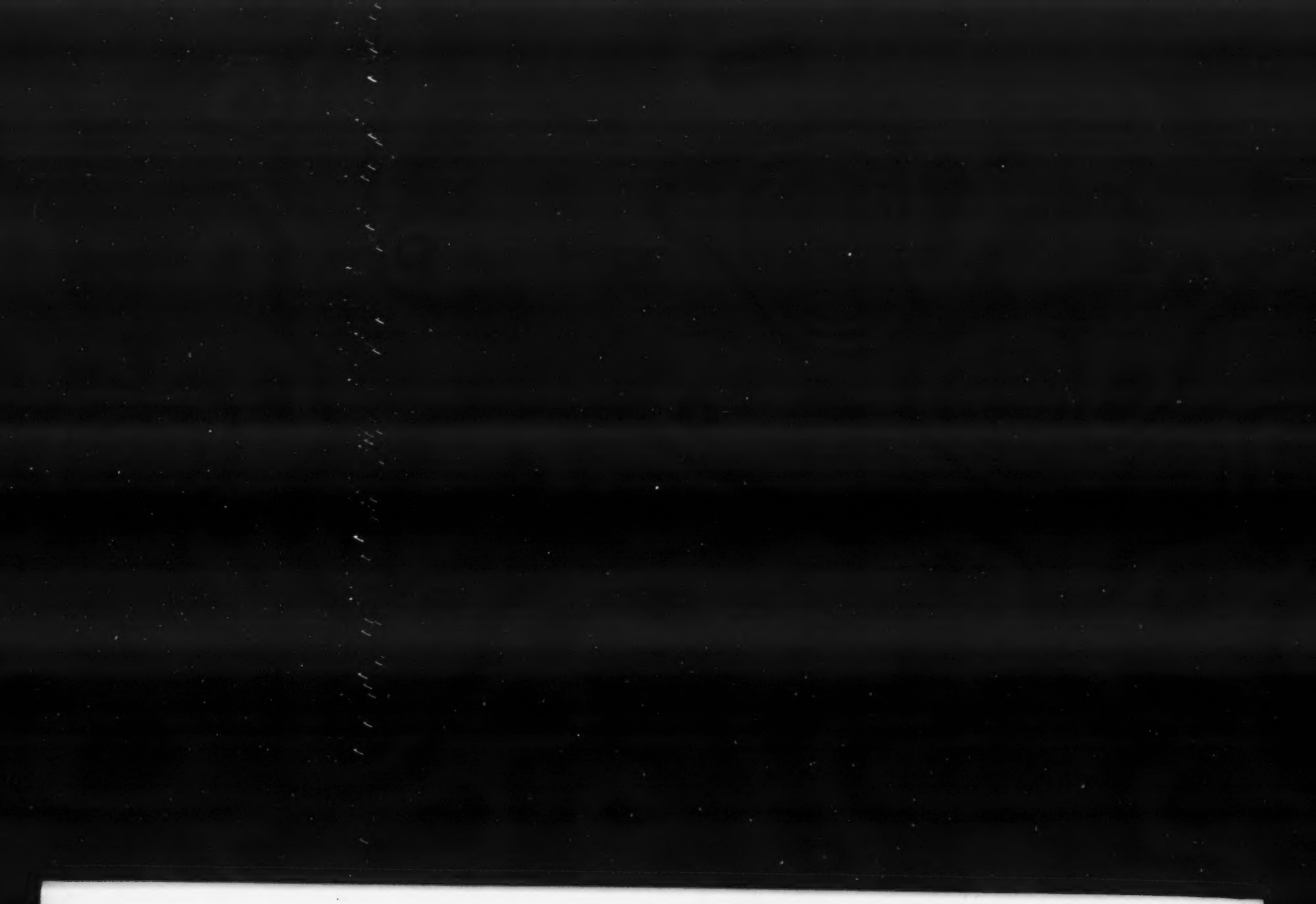

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